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VOLLEY BALL

By

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*Director of Recreation and Health
Boston Y.M.C.A.*



NEW YORK

A. S. BARNES & COMPANY

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Sixth Printing

PRINTED IN THE UNITED STATES OF AMERICA

DEDICATED

TO

DR. GEORGE J. FISHER, M.D.

PRESIDENT UNITED STATES VOLLEY BALL ASSOCIATION

EDITOR, OFFICIAL VOLLEY BALL GUIDE

**Whose skillful and loyal leadership of the
United States Volley Ball Association has made a
definite contribution to the progress of the game**

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VOLLEY BALL

HISTORY OF THE GAME

The game of volley ball was "invented" in 1895 by William G. Morgan, at that time the physical director of the Holyoke, Mass., Y.M.C.A. He had large classes of business men and felt that a game was needed which would provide an opportunity for their recreation and relaxation. The new game of basketball was very strenuous. He raised a tennis net to a height of six feet, over which a basketball bladder was batted. This ball proved to be unsatisfactory as it was too light, and the regular basketball with its leather cover was too heavy, so he wrote A. G. Spalding & Brothers to make one for trial. It is interesting to note that the original specifications for this ball have been in conformity with the modern development of the game.

Soon afterwards the game was first demonstrated by two teams from Holyoke before a group of physical directors at a conference held at Springfield College, in Springfield, Mass. The first article on this new game appeared in the publication *Physical Education* in the July, 1896, issue. It was written by J. Y. Cameron of the Buffalo, N. Y., Y.M.C.A. The following comment was made: "Volley ball is a new game which is preëminently fitted for the gymnasium or the exercise hall, but which may be played out of doors. Any number of persons may play the game. The play consists in keeping a ball in motion over a high net from one side to the other, thus partaking of the character of the two games, tennis and handball."

The following rules, taken from the same article, offer some interesting sidelights on how the game was played in the "good old days":

- "1. *Game.* The game shall consist of nine innings.
- "2. *Innings.* An inning consists of
 - a. When one person is playing on each side, one service on each side.
 - b. When three or more are playing on each side, three serves on each side. The man serving continues to do so until out by failure of his side to return the ball. Each man shall serve in turn.
- "3. *Court.* Twenty-five feet wide by fifty feet long.
- "4. *Net.* Two feet wide and twenty-seven feet long. Top of net six feet six inches from the floor.
- "5. *Ball.* The ball shall be a rubber bladder covered with leather or canvas. It shall measure not less than twenty-five inches nor more than twenty-seven inches in circumference, and shall weigh not less than nine ounces nor more than twelve ounces.
- "6. *Server and service.* The server shall stand with one foot on the back line. The ball must be batted with the hand. Two services or trials are

allowed him to place the ball in the opponents' court, as in tennis....In a service the ball must be batted at least ten feet, no dribbling allowed. A service which would strike the net, but is struck by another of the same side before striking the net, if it goes over into the opponents' court, is good. If it goes outside, the server has no second trial.

"7. *Scoring*. Each good serve unreturned or ball in play unreturned by the side receiving, counts one score for the side serving. A side only scores when serving, as a failure to return the ball on their part results in the server being put out.

"8. *Net ball*. Ball hitting the net, aside from the first serve, is counted as a dead ball.

"9. *Line ball* is counted as out.

"10. *Play and players*. Any number of players. Touching the net by players puts the ball out of play. Holding the ball is banned. Ball hitting any object out of the court and bounding back into the court is counted as a good ball. Dribbling is allowed within four feet of the net."

The game developed rapidly under the supervision of the Y.M.C.A. Physical Directors' Society. The following changes in rules were made in 1900: *Game*, twenty-one points. *Net*, seven feet. *Line ball* counted as in court. Ball striking obstruction ruled out of court. *Dribbling* was prohibited.

In 1912 a special committee of Y.M.C.A. men was assigned to the task of studying the rules and recommended the following changes: *Court*, thirty-five feet by sixty feet, height seven feet six inches, width three feet. The rotation feature was introduced.

Since then the following major changes have been made. In 1917, *net*, eight feet; fifteen points to a game. 1918, *team*, six men. 1921, center line. 1922, *ball* played only three times on each side of the net. Player in back field not allowed to spike the ball. 1923, *court*, thirty by sixty. Score, when fourteen-all, two points in succession to win. 1925, *score*, when fourteen-all, a team must score two more than its opponents to win.

Recent changes: 1937, multiple contact on spiked ball. 1938, blocking rule, permitting two men in adjacent positions in the front line to block. 1941, *ball* in play above knees instead of hips.

In 1917, the first complete Volley Ball Guide made its appearance, being published by the American Sports Publishing Company of New York. The National Collegiate Athletic Association joined with the Y.M.C.A. in the preparation of the rules. Dr. J. H. McCurdy, C. V. P. Young and Dr. G. Meylan were the collegiate representatives who, with Christopher Scaife and Dr. George J. Fisher of the Y.M.C.A. Physical Directors' Society, were asked to edit the rules. Dr. Fisher deserves great credit for his contribution to volley ball. He has been the editor of the Guide since its inception, and has been a leading light in the development of the game. During these years John Doyle, who was connected with the American Sports Publishing Company, also worked efficiently and faithfully.

Intensive volley ball received its first impetus when the Y.M.C.A. National Volley Ball Championships were held in 1922 at the Brooklyn, New York, Central Y.M.C.A. Bob Cubbon and his volley ball enthusiasts got the game under way when twenty-seven teams from eleven states battled for the first title. It was won by the famous Pittsburgh Y.M.C.A. team. The championships have been a constant stimulus to coaches and players to improve their game.

Twenty Championships have been held since 1922, the following chart showing the placements.

Y.M.C.A. NATIONAL CHAMPIONSHIPS

YEAR	HELD AT	WINNER	SECOND	THIRD
1922	Brooklyn, N.Y.	Pittsburgh, Pa.	Germantown, Pa.	Johnstown, Pa.
1923	Chicago, Hyde Park	Pittsburgh, Pa.	Aurora, Ill.	Evansville, Ind.
1924	Pittsburgh, Pa.	Pittsburgh, Pa.	Germantown, Pa.	Cedar Rapids, Iowa
1925	Des Moines, Iowa	Pittsburgh, Pa.	Fort Wayne, Ind.	St. Paul, Minn.
1926	Philadelphia, Pa.	Pittsburgh, Pa.	Germantown, Pa.	Philadelphia, Pa. Cent.
1927	Fort Wayne, Ind.	Hyde Park, Chicago, Ill.	Pittsburgh, Pa.	Brooklyn, N. Y. Cent.

OPEN NATIONAL CHAMPIONSHIPS

YEAR	HELD AT	WINNER	SECOND	THIRD
1928	Chattanooga, Tenn.	Germantown, Pa.	Hyde Park, Chicago, Ill.	Brooklyn, N. Y. Cent.
1929	Univ., Chicago, Ill.	Hyde Park, Chicago, Ill.	Division St., Chicago, Ill.	Germantown, Pa.
1930	Columbus, Ohio	Hyde Park, Chicago, Ill.	Denver, Colo.	Division St., Chicago, Ill.
1931	Univ., Rochester, N.Y.	San Antonio, Texas	Division St., Chicago, Ill.	Hyde Park, Chicago, Ill.
1932	Hyde Park "Y," Chicago	San Antonio, Texas	Hyde Park, Chicago, Ill.	Division St., Chicago, Ill.
1933	Chicago Naval Armory	San Antonio, Texas	Hyde Park, Chicago, Ill.	Division St., Chicago, Ill.
1934	Knoxville, Univ. of Tenn.	Houston "Y," Texas	Division St., Chicago, Ill.	Philadelphia, Pa. North
1935	Binghamton, N.Y. State Armory	Houston "Y," Texas	Division St., Chicago, Ill.	Philadelphia, Pa. North
1936	Davenport, Iowa	Houston "Y," Texas	Philadelphia, Pa. North	Davenport, Iowa
1937	Louisville, Ky.	Duncan "Y," Chicago, Ill.	Philadelphia, Pa. North	Greensburg, Ind.
1938	Detroit, Mich. "Y" Sports Congress	Houston "Y," Texas	Davenport, Iowa	Clinton, Iowa

OPEN NATIONAL CHAMPIONSHIPS

YEAR	HELD AT	WINNER	SECOND	THIRD
1939	San Francisco, Cal.	Houston "Y," Texas	Los Angeles Athletic Club	Houston, Texas Hughes Tool
1940	Philadelphia, PAC	Los Angeles Athletic Club	Houston "Y," Texas	San Francisco, Cal.
1941	Ann Arbor, Mich. Univ. of Mich.	North Ave., Lar- rabec "Y," Chicago, Ill.	Houston "Y," Texas	Hughes Tool, Texas

When the Open National Championships were inaugurated in 1926, the Y.M.C.A. conducted the Y.M.C.A. Veterans' Tournament in conjunction with this tournament. Players in this contest must have reached their thirty-fifth birthday. Both these tournaments have been conducted by the Y.M.C.A. upon request of the United States Volley Ball Association.

The first, second and third teams in each of the Tournaments have been:

YEAR	HELD AT	WINNER	SECOND	THIRD
1928	Chattanooga, Tenn.	Chattanooga, Tenn.	Atlanta, Ga.	
1929	Hyde Park, Chicago	Springfield, Ohio	Hyde Park, Chicago	Chicago Cent.
1930	Columbus, Ohio	Lansing, Mich.	Springfield, Ohio	Pittsburgh, Pa.
1931	Rochester, N.Y.	Lansing, Mich.	Rochester, N.Y.	Camden, N.J.
1932	Chicago, Ill.	Joliet, Ill.	Hyde Park, Chicago	Victor Lawson, Chicago
1933	Chicago, Ill.	Joliet, Ill.	Hyde Park, Chicago	Division St., Chicago
1934	Knoxville, Tenn.	Fort Wayne, Ind.	Knoxville, Tenn.	Chattanooga, Tenn.
1935	Binghamton, N.Y.	Fort Wayne, Ind.	Buffalo, N.Y.	Binghamton, N.Y.
1936	Davenport, Iowa	Fort Wayne, Ind.	Binghamton, N.Y.	Chicago, Ill.
1937	Louisville, Ky.	Fort Wayne, Ind.	Indianapolis, Ind.	Binghamton, N.Y.
1938	Detroit, Mich.	Fort Wayne, Ind.	Indianapolis, Ind.	Evanston, Ill.
1939	San Francisco, Cal.	Pasadena, Cal.	Seattle, Wash.	Long Beach, Cal.
1940	Philadelphia, Pa.	Fort Wayne, Ind.	Somerville, Mass.	Binghamton, N.Y.
1941	Ann Arbor, Mich.	Davenport, Iowa	Somerville, Mass.	Fort Wayne, Ind.

In 1927 the Amateur Athletic Federation requested that an open National Tournament and Championship be held in which other than Y.M.C.A. teams might participate. Hence in 1928 volley ball came into national recognition with the formation of the United States Volley Ball Association. Dr. George J. Fisher, editor of the Volley Ball Guide was made President and has maintained that position to the present time.

One great advantage of this organization has been the enlargement of the Volley Ball Rules Committee, permitting representation from all the national organizations interested in the game. This now includes: Boy Scouts of America, National Collegiate Athletic Association, National Recreation Association, Boys Clubs of America, United States Army and Navy, Women's Section on Athletics of the American Association for Health, Physical Education and Recreation, Camp Fire Girls, Jewish Welfare Board, Young Men's Christian Association, Amateur Athletic Union, American Association for Health, Physical Education and Recreation, and American Turners.

The United States Volley Ball Association meets annually in New York in June to consider the progress and problems of the game as well as to revise the rules.

The game has steadily developed in style of play over the years—from a see-saw slow moving one to a spectacle of exciting, vigorous action. The serving has passed through several stages from a slow lobbing to one of exact placement; from this to a hard-driven serve; then curves; then the tide turned back to what is known as a safe serve or a ball which is curved or well placed. Many coaches question the value of the hard-driven serve.

The passing has developed from a pushing action to an efficient clean-cut finger handling of the ball which controls it to the 'nth degree. The officiating and rules call for this type of play which necessitates a definitely batted ball. Most of the passing and setting up consists of balls which are elevated to a rather high position, five to ten feet above the net.

The attack has gained in power and drive as well as in having the ability to hit the ball when it is set up back from the net. The chief headache of the modern attack is the use of the block; formerly it was not counted as good team work to block, other than in the center position, when the ball was close to the net. At present many first-class teams use a two man block in all attack plays at the net. The defensive and offensive work of some of these blockers is a marvel to behold. The defensive play is now geared up to go after every ball. In the "good old days" when "big John" went up after a ball to kill it, every one got out of the way. But not so today, as every ball is played, and not only played but in a good percentage of attempts the ball is recovered.

The game has developed in remarkable style. It is played in many countries of the world. It is gaining favor in schools, colleges, recreation centers and playgrounds; in fact, wherever you find people interested in recreation and play, you will find volley ball one of their favorite games.

GENERAL FUNDAMENTALS AND PRINCIPLES

The game of volley ball is similar to the game of tennis in that the ball is played back and forth over a net. The chief difference between them is in the height of the net, size of the court, number of players and the fact that the ball must be batted before it touches the ground, or floor, of the court played on. The outside dimensions of the volley ball court are sixty by thirty feet. This area is divided across the center by a net which is three feet wide, the top of which is eight feet from the floor. Each half of the court

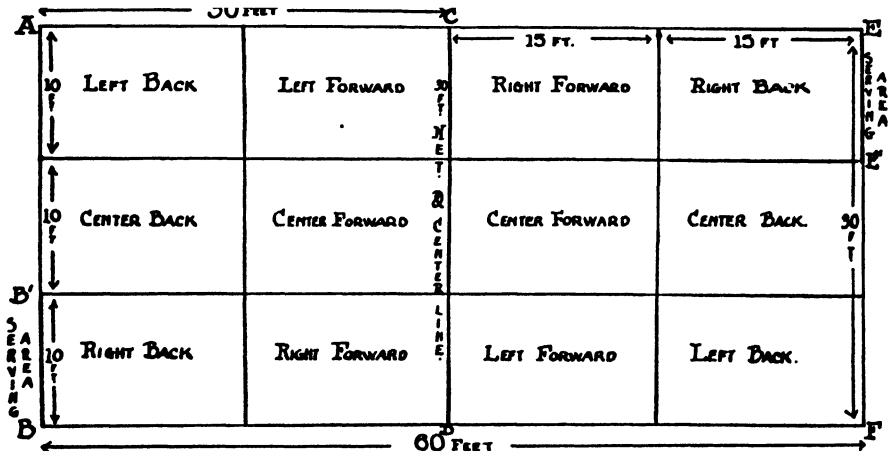


Diagram 1. VOLLEY BALL COURT SHOWING POSITIONS OF THE PLAYERS

is divided into six equal parts, each ten by fifteen feet, marked by crosses at the intersections of these boundaries.

There are six men on a volley ball team and each man is responsible for covering the ground in one of these areas. This division of the team places three men in the front half of the court and three in the rear. These positions have designated names in relation to the court. They are left forward, center forward, right forward, right back, center back and left back. A team of six men is again divided into three pairs. One man of the pair being known as the "set-up man" and the other the "spiker or the attack." The set-up player is responsible for the correct placement of the ball so that the spiker may hit it over the net into the opponents' court in such a manner that it will be difficult to return.

According to the rules, each player must be in his area when the ball is put in play by the service. Players are not permitted to deliberately interchange positions in their offensive play; however, it is possible for players to go to any part of their court in defensive play in order to retrieve the ball. The emphasis on this rule is to keep players in their relative positions and not confine them to their responsible area.

For descriptive purposes A will represent one team and B, the other. Team A starts the game. The player in the right back position goes to the serving area, which is directly back of the right back area of the court. The dimensions of this area are ten feet across, with unlimited space to the rear. The boundary of the service line is marked by a short line ten feet in from the end of the court. The server stands in the serving box back of the end line of the court, and must remain back of this line until the ball has passed by the service line. All other players on both sides must at this time be in their respective positions. The service is made by hitting the ball with any part of the hand or fist over the net into the opponents' court. It must go over the net without hitting it and land in the opponents' court. If it goes out of bounds or hits any other obstruction, the serve is lost and no points scored for either side.

If the serve is completed, the players on team B then play the ball as follows: the first man to receive the serve is known as number 1. It is his duty to pass the ball into the forward part of the court in such a manner that it will not be difficult for the next man, number 2, to play it. Number 2 is known as the set-up. You will remember that he is a member of one of the pairs. He makes a decided effort to set up the ball close to and above the net on his own side. Now number 3 comes into the picture. He is supposed to jump into the air and hit the ball with a spiking motion so that it will be difficult for the opponents to return it.

The above system is known as the standard volley ball playing procedure. Number 1 or 2 may return the ball over the net without passing it but this does not give an opportunity for team work and tends to make the game a ping-pong affair. Players are not permitted to hit the ball twice in succession; however, number 1 could pass it to another player and then have it returned to be hit again on the third play. The ball can be played only three times on each side of the net.

Volleying continues back and forth until one of the sides commits an error or foul. When team A is serving and team B fails to return the ball over the net or has a foul called on it, team A scores one point. Fifteen points constitute a game unless the score reaches fourteen to fourteen. At this point a team must score two more points than its opponent to win the game.

If team A fails to make a legal serve at the start of the game, or fails to return the ball over the net during play, it loses the ball and no points are scored for either team. At this point another feature of the game is introduced known as "the loss of serve" and "rotation." The team which loses the serve remains in position. The team which receives the ball for a service must rotate, that is, each player moves one position in a clock-wise manner.

The right forward moves back to the service box for the serve; the right back moves to the center back position; the center back to the left back; the left back goes forward to the left forward, the left forward to the center position and the center moves to the right forward area. Rotation always takes place on the change of serve.

The referee is the chief official of the game and his position is on a platform so constructed that he may have a clear vision of the top of the net and both courts.

The more important rules of the game include the following:

GENERAL RULES

1. A ball may be played off the net except on the service.
2. If a ball other than the serve hits the net and goes over the net, the ball is in play.
3. The ball must pass over the net within the side boundaries.
4. Players may change positions at the beginning of a game but not during it. Substitutions may be made at any time.
5. The losing team has the privilege of serving first on the next game.

FOULS AND VIOLATIONS

Loss of serve if a foul is committed by serving team. A point is scored by the serving team if foul is committed by the receiving team.

1. *Step on* or over the line while serving.
2. Step over the center line under the net. Players may step on line.
3. Touch the net or supporting cables with any part of body while the ball is in play.
4. Reach over the net under any circumstance.
5. Scoop, lift, shove, throw or follow the ball or allow it to come to rest momentarily in the hands. It must be clearly batted.
6. Play the ball twice in succession. The present rule, however, permits a defensive player to have multiple contacts on a hard-driven spike.
7. Allow the ball to touch any part of body below the knees.
8. "Four-hits," the ball must be returned over the net in a maximum of three plays.
9. Serve out of turn. No points made by the server shall count.
10. Reach under the net and interfere with the ball while the opponents are playing it.
11. Spike or attack a ball when playing a back position.
12. Blocking is illegal when two men not in adjacent positions block.

STANDARD POSITIONS, COMBINATIONS AND PLAYS

Up to this point we have not been concerned about the development of the play other than the fundamental routine of the pass, set-up and attack. The following description will deal with general principles of team play. As previously mentioned there are two lines of players in the game of volley

ball, the front and back, composed of three men each. On receiving the serve the front line stands back about ten to twelve feet from the net, and the back line about fifteen to twenty feet. On general defensive play this formation comes nearer the net, depending on the location of the attacking play on the other side of the net. The back line is responsible for passing

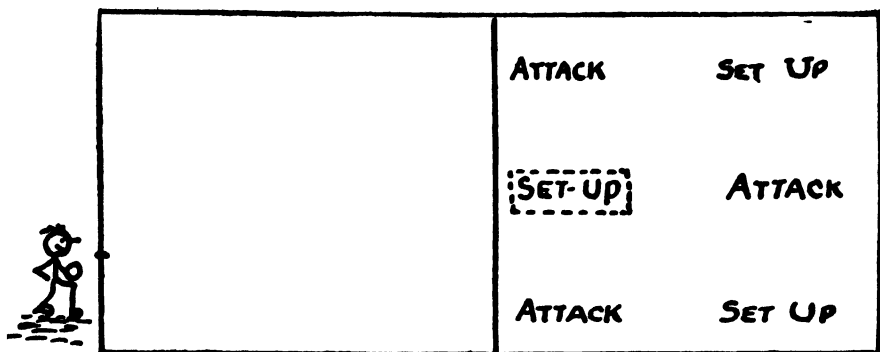


Diagram 2. SET-UP IN THE CENTER

the ball forward to the front line, who in turn put it over the net. The forward players are not supposed to come into the back positions of the court, especially for the first ball served, or one played over the net. The forward players must keep their hands down below the shoulders and not raise them above their heads in playing a ball which is bound for the back field.

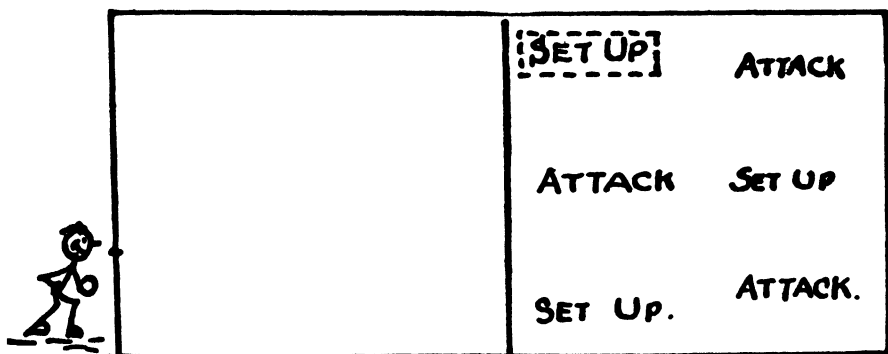


Diagram 3. SET-UP IN THE RIGHT FORWARD POSITION

As in basketball and football, there are two types of players; one set does the more or less spectacular work, while the other does the routine preliminary colorless chore of getting the stage ready for the scoring of the goal or the scoring of the touchdown. In volley ball these assignments are known as the set-up and the attack. The set-up goes after the ball and sets

it up in the air, permitting the attack to jump up and pound it down on the other side of the net. These two men work in pairs and they stay together through all play. They work as a unit. The set-up player is responsible for the recovery and the set-up of the ball to the same attack in practically all plays when the attack is at net position. The set-up rarely sends the ball over the net in play. The attack tries to outwit the opposition by placing the ball in open spaces and driving it through the defensive set-up.

There are standard plays in the game which make it possible for a team to put its maximum effort into each play. If you will look at Diagrams 2 and 3, it will be seen that there are two fundamental positions into which every team rotates. An exception is when the attack is left-handed. The orthodox play is to send the ball to the set-up man whose attack partner is at the net. In the first case the set-up is in the center forward position, and in the second instance he is in the right forward position. When the ball is played or served to the back line, it is passed up so that the set-up is able to get into proper position for the most efficient setting up of the ball to meet the desires of the attack. If the first passer of the ball sends up a poorly placed ball, the set-up is placed at a disadvantage in his effort to properly deliver the ball to his attack. If the pass is high and well placed, then the scene is set for a perfect play. In general, it is an accepted principle that the set-up gets the second ball. Teams which use this system play a better game, due to the certainty of knowing just who is responsible for the play.

It seems simple as we visualize the game, but in reality the finished one, two, three play of volley ball, accompanied with the resulting defensive play of the opposition, makes one of the most enjoyable combinations of team play manifested in any game.

FUNDAMENTAL TECHNIQUES OF HANDLING THE BALL

Satisfactory and successful play in volley ball depends on the ability to handle the ball properly. One reason why many ardent and enthusiastic beginners fail to stay with the game is because they do not learn the simple fundamentals of proper finger, hand, arm and body coördination. The majority are able to learn these simple fundamentals in a very short time, although it takes years of constant practice to become highly skilled in this art. The coach or director should stress the importance of this department of the game, and attempt to have every player take pride in his ability to handle the ball.

The first ball which is received by a player from the serve and sent forward on the first play will be known as the "pass." The reception of this pass by the next player and the resulting action of setting up the ball for the third play will be known as the "set-up."

HANDLING THE BALL.—THE PASS

I. *The Low Ball.*

Handling the ball, when it comes to a player in such a position that it is below the waist, is one of the easiest ways to retrieve the ball, and yet one of the most inefficient as well as most likely to be called a foul for holding. First of all, it is natural for a person to bring his arms forward with a swinging upward lifting motion. Then, due to the fact that the ball drops into one's hands while in this position, it almost makes it a perfect combination. Unfortunately the above facts do not support the better playing of the ball, for it is found that it is very difficult to set the ball up with precision, and there is a tendency for the player to let the ball come to rest in his hands, with the resulting action of tossing the ball and not batting it, as the rules require. There is much discussion in official circles regarding the calling of this foul. The safe way is for coaches to teach the players how to care for the ball from other than the low position. Of course there are times when it is impossible to recover the ball in any other way and hence the reason for the following suggestions on how to handle the low ball.

The feet are placed on a line or with one foot slightly advanced and the knees bent. The arms are flexed at the elbows and rotated so that the thumbs are pointed outward. The palms are turned up and the fingers slightly flexed. When the ball makes a contact with the fingers, the entire body

comes into play, the knees straighten, the hips come forward in a lifting action, the shoulders go back and the arms and hands swing upward in a scooping or lifting motion. To be correct, the ball is batted and not tossed. It is most important to see that the fingers are the contact points with the ball. The ball may touch the palm of the hand on some passes, but one gains greater control of it if only the fingers are used. Avoid hitting with the heel of the hand as it sends the ball usually off on a tangent.

2. *The High Ball.*

During the game a great percentage of the balls come to a player in such a position that it is possible for him to use what is known as the chest pass. The ball is played from in front of the chest and shoulders and has proven to be the most effective method of correctly playing the ball. Time spent on teaching the fundamentals of this procedure will give the greatest returns in improved playing ability. Players should be coached to step forward to meet the ball if it falls short, or bend for it if there is not time enough to change position, or step back if the ball comes too high.

The movements in learning this method at first seem awkward, but this feeling soon passes when the player senses the ability of direction and power which accompany the correct execution of the movement. In teaching this skill, it is well to spend the first few minutes in emphasizing the importance of handling the ball correctly, its part in the game and the player's relationship to it.

The next point to explain is the fact that the ball is to be handled by the inside fleshy parts of the fingers. If the ball hits the palm or heel of the hand it will be difficult to control. Hitting the palm deadens the ball, tending to make it a foul, while hitting the heel of the hand makes it difficult to control.

Following are the fundamental positions of the passer: The left foot is advanced in order to give a comfortable stance. The knees are slightly bent and the body tilted forward. The elbows are raised sideward to a point below the line of the shoulders. The wrists are extended to a maximum in line with the forearm and the arms, wrists and hands are rotated inward, depending on the length of the thumb and fingers and the angle of the back body bend. The hands are placed chest high, thumbs in and pointing downward. The fingers are spread and extended in an upward direction toward the opposite hand. The fingers are slightly flexed but held firm for the impact of the ball. The above placement forms a concave surface with the fingers, palm and heel of the hand. The volley ball should fit into this pocket which now resembles a cup. Prior to the reception of the ball the up and down diameter of this area is nearly vertical. In order to impress the correct placement of the hands and arms have the student catch the ball and hold it in the exact position. This will give the coach an opportunity to check on the stance, including leg, body, arm and finger positions and to demonstrate the use of the fleshy parts of the fingers in handling the ball.

In tossing the ball to the student throw or toss it up into the air about ten feet so that it will drop down to his hands, rather than tossing it directly at him on a more or less horizontal plane. Explain that the rules do not permit the holding of the ball, but it is necessary for one to get the feeling of the correct placement of the ball. Toss it several times until you are sure that he has acquired a feeling of the right way to contact the ball. In order to save time it is suggested that the ball be tossed rather than batted to the beginner.

Note that when the body bends backward or when the elbows are raised upward, the angle of the receiving surface of the hands changes from the

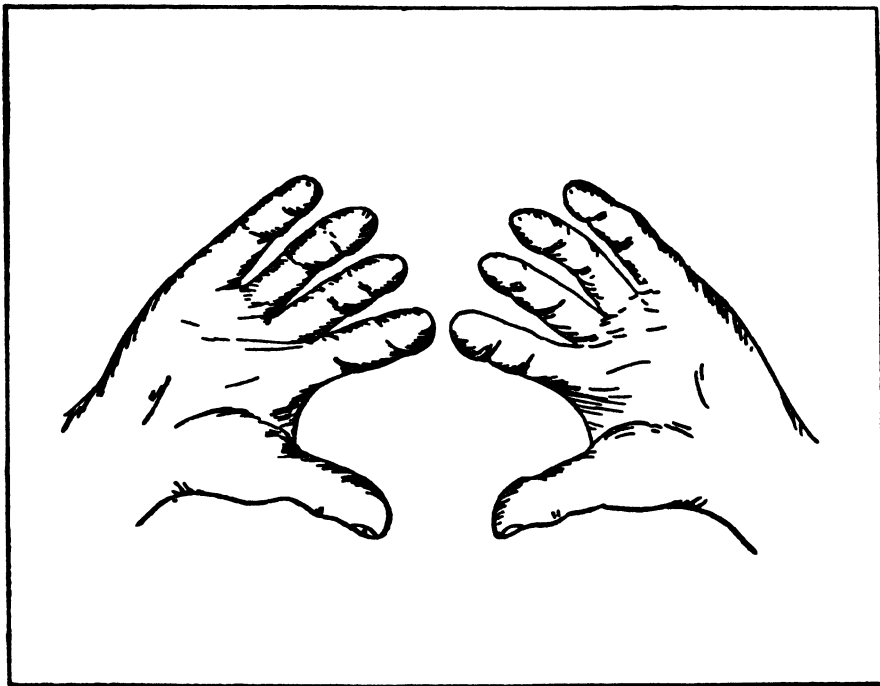


Diagram 4. CORRECT PLACEMENT OF HANDS

vertical plane assumed prior to the reception of the ball, to one in which the surface of the so-called bowl is tipped upward to meet the oncoming ball. The greater the back bend the nearer this surface approaches the horizontal plane. The correct body bend, position of elbows, arm and finger placement must be worked out to suit each individual player.

The next step is to have the beginner bat the ball instead of tossing it. The teacher should demonstrate the correct pass, showing how easily the ball can be handled and directed when the whole body coordinates in the proper manner. Emphasize the "elbows out position," the fleshy parts of the fingers on the ball and the arm extension for power.

Be sure to toss the ball so that it will come to him from a height rather than a horizontal or near horizontal position. This will assist him in getting set for the following action. As the ball starts its downward flight, coach the player to extend his arms to meet it. (See Diagram 5a.) Follow the ball back without touching it until it is at chin or chest height; at this point the fingers and wrists stiffen in contacting the ball. This action makes possible the batting of the ball rather than catching it. The impact of the ball forces the fingers and hand to be carried back a trifle, but not enough to technically hold the ball. At the same time the forward action of the pass is started by snapping the wrists forward and upward and extending the fingers to their limit.

The arms are also extended upward at the same time until they have reached the outstretched position. The use of the extended arms is the power factor in the pass. Many players have trouble in being able to get any distance into their passing. Close examination of their action will reveal that they

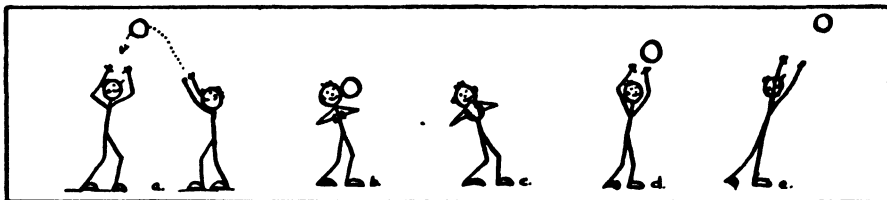


Diagram 5. HANDLING THE BALL

are not getting the full extension of the arms but making short jabs at it. It is well to keep in mind that control is a factor determined in general by the action of the wrists and fingers, and the power factor by the action of the arms and movement of the body. The whole body comes into action in the same movement, namely, the knees are straightened, the shoulders come forward, the body weight is shifted from the rear leg to the front as the arms, wrists and fingers are fully extended.

If the above mentioned techniques are presented in such a manner that the student will understand the reason for each action, progress will be apparent in a brief period of coaching. There is a fine feeling which comes to an individual when he is able to pass the ball skillfully. We should strive to have players take pride in their ability. It will increase their satisfaction as well their acceptability in the team game. A skillful passer is a valuable asset to any team.

Some of the key coaching points in teaching the pass are:

A. Look for the tendency in most players to lower their elbows. So many men and boys have played basketball that it seems natural for them to bring the elbows to the side for the standard basketball shot. When the elbows are dropped the heels of the hand are the first point that a ball will hit; this makes it difficult to handle the ball properly and also increases the

liability for finger injuries. In the fundamental position brought about by the raising of the elbows, the fingers are on the inside of the cup with less chance for injury.

B. One method for knowing whether the ball has been handled properly or not is to listen to the sound which accompanies it when contact is made with the hands. When all ten fingers hit simultaneously there is a click or putt sound. It is distinct, there is no doubt. This is quite distinguishable from the ball which touches the palm or heel of the hand which makes a dull slap or thud. This second sound will also tend to be sustained due to the additional points touched on the ball. Let your players understand what you mean by passing the ball "with a click" and not with "a thud."

C. If power is lacking in distance or height, look for the fault of not extending the arms sufficiently, or following through with the body and arms.

D. When a high ball comes to a player, the elbows are raised above the shoulders, the back is bent and the ball is played just over and in front of the face. This calls for quite an arch in the back. However, much power comes from this delivery through the combined action of the back and shoulders.

E. The next step in the process is to practice passing the ball back and forth, the height of the pass ranging from ten to twelve feet. At first do not attempt to get the ball too high, as the main objective is control and the coördination of various parts of the body. After this has been accomplished, and only then, is it wise to see how high or how far the ball can be passed.

Every player on the team must be a good passer. If not, the poorer will be singled out and played to whenever possible by the opponents. No coach can lay too much stress on this point, and while the make-up of this section of the text may appear verbose, it is for the sake of presenting the importance of having the ability to pass the ball. It is the first fundamental of good volley ball.

HANDLING THE BALL—THE SET UP

Closely allied to the pass is the set up. There are three regular set-up players to each team who work with their respective attacks. It is of paramount importance that each player have the ability to handle the ball in a manner satisfactory to any of the other players on the team.

The set-up player usually receives the second ball of any series of plays. If the pass is good and comes to him satisfactorily there is no reason why he should not make a perfect set up. His task under perfect conditions is rather simple. Many times, unfortunately, he is forced to run all over the court in order to retrieve a ball and must then attempt to place it so the attack will be able to hit it properly.

It is absolutely essential that the set-up use the chest pass method of handling the ball. He will be able to control and direct the ball to a greater degree as it is in a much better position to handle and is nearer the objective than the underhand set up. One problem brought about by the use of the

underhand set up is the difficulty of following and holding on to the ball, which is of course a foul. According to some officials it is next to impossible for a player to set the ball up with this method without actually holding the ball for an appreciable period of time.

1. Generally speaking there are three kinds of set ups: (See Diagram 6)

A. The first is the high one which is passed up into the air close to the net to the height of fifteen or more feet. This is placed in most cases so that it will come down within six inches to two feet of the net. Some tall rangy players like this type of ball and are able to play it consistently as far back from the net as six to ten feet. In general it is better to have it within six to eighteen inches of the net.

B. The second type of set up is known as the low set up. It is not used at present but it seems to the writer that this type of play should be used more frequently. The majority of set-up-and-attack combinations continue to use the high set up because it has been the traditional method of playing the ball. The low set up is passed two or three feet above the net and very close

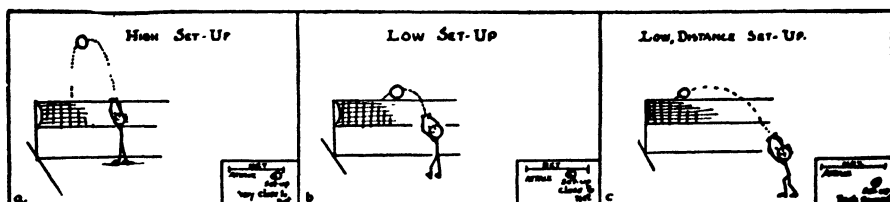


Diagram 6. SET UPS

to it, three to twelve inches. This is effective in quick plays in which the opposition does not have an opportunity to get set for the play. It is also the easiest ball for the shorter in height attack players to handle as it seems to hang in the air for them. This is due to the fact that the high set ups falling from a greater height consequently gain momentum in their downward flight, so that when they pass through the area in which the attack endeavors to hit the ball they are traveling at a greater speed. This of course calls for more expert timing. The low set up ball reaches its height, pauses momentarily and then starts its descent gradually, passing through the attack or hitting space quite slowly.

In setting the ball up for this play, the set-up should have the ball passed to him so that he plays it from a position which is close to the net. The further back from the net he is forced to play the ball, the more difficult will be the set up. It is a spectacular movement in the game for it calls for perfect timing on the part of the attack.

C. The third type of set up is one which is not used regularly. This play is made when the ball is set up from a point which is ten or more feet in back of the net. Rather than passing the ball high into the air it is sent diagonally forward on a low arch to the net. The set up should be high enough to go over the net in case the attack fails to hit it. This is similar

to the low set up but the angle and distance from the net of the set up makes it worthy of note and inclusion in the various methods to be used in offensive play.

2. GENERAL CONSIDERATIONS OF THE SET-UP PLAYER

While there are fundamental movements in setting up the ball each set-up player must deliver the ball to his attack partner as he desires it. This comes down to the problem of discovering just what kind of ball the attack prefers. When this is agreed upon by both players then it is necessary for the set-up to practice handling the ball so that it will be satisfactory in team play. The following principles are applicable for any set-up player, when in the front line with his partner in the attacking position.

It is the duty of the set-up to recover the pass (the play of the first ball) providing it is within range of his ability to play it. This is important as it eliminates confusion of players in going after the ball. Now, with this point settled, the next is "how to play the ball." There are three possibilities:

A. First, when the pass comes to the set-up close to the net (within two to five feet) in his playing area. The set-up should face the oncoming pass, placing his hands, arms, body and legs in the fundamental chest pass position. As the ball descends he should change his body position, if necessary, so that he is directly facing his attack partner.

B. When the pass is poorly placed, the set-up must leave his favorite position to play the ball. It may be necessary for him to move sideward, backward or ahead in order to get under the ball. It is wise to face the attack in order to make the play direct. He must be alert to the position of his attack partner, and while going out to recover the ball be able to size up the situation at a glance. Sometimes he is able to make the set up with his back to the attack. This is possible when players become more skilled and is one of the spectacular plays of the game. The place where this play is possible is when the ball is passed to one side of the court. The set-up utilizes the net as a guide.

C. In setting up balls which come below the chest, it is best to coach the players to drop down on one knee and play the ball with the chest pass technique. If a coach is able to have his players see the value of this, it will be the means of scoring many more points. It is much easier to set a ball up from this position than by scooping it. The difference is in the amount of energy expended and the fighting spirit of the contestants. It is easy to get lazy in play. Perfect set ups have been made with the set-up literally "on his back" making the pass.

It will be necessary at times to use the scoop method of handling the ball especially if the ball comes lower than the hips.

3. THE CORRECT PLACEMENT OF THE SET UP

This means success or failure in the effectiveness of the attack, which is the scoring power of a team. The ball is set up with two specific objectives;

first, the correct height, and second, the right distance from the net as it passes through what is known as the "attacking area" or those points at which a ball may be hit. The height of the set up will vary from ten feet for the low set up to eighteen or more feet for the high set up. The correct height will depend on the requirements of the attack, that point at which he is able to play the ball most effectively.

The distance from the net ranges from two to twenty inches for the majority of players. It is at this distance from the net that a player may direct or have better control over the ball. The further back from the net one is forced to hit the ball the more difficult the angle of placement and

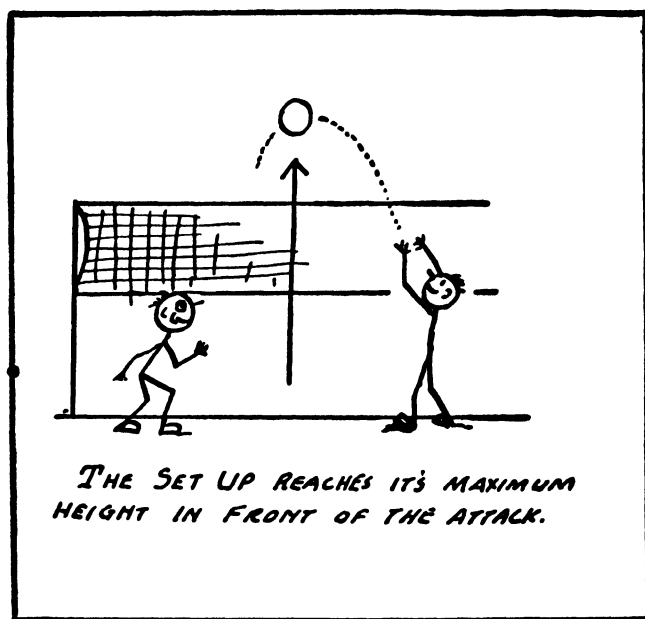


Diagram 7. THE SET UP SHOULD BE PLAYED IN FRONT OF THE ATTACK

opportunity for scoring. Again it is a matter of likes and dislikes of the attack in relation to how far back from the net the ball should be placed.

A cardinal principle to be recognized by the set-up is that illustrated in Diagram 7; namely, that all set ups should be passed so that the ball will always be in front of the attack. The highest point that the ball reaches should be a point which is midway between the set-up and the attack. Far too many set ups have been useless because they have been pitched too far over the head of the attack. In such cases the attack is forced to reach backward over his head to recover the ball. In this position he is off balance and liable to be called for a foul for throwing or pushing the ball. The set-up should therefore make every effort to keep the ball in front of the attack.

Sometimes it is wise to have the set-up pass the ball up over his own head and let the attack come after the ball. This is helpful to some players who have the fault of continually over-casting their set ups. After making this type of a set up the passer steps out of the way to let the attack have the right of way.

PRACTICE SUGGESTIONS

Players who are really concerned about learning the art of passing correctly will be faithful in practicing. This type of work will develop the musculature of the fingers and arms, as well as gradually increase the passing ability.

1. The most helpful practice stunt used for beginners is to form a circle with the coach in the center. He tosses the ball to each man in turn and has him pass it back to him. This will give him the opportunity for spotting the weak points in the beginner's pass. It may be necessary to pass the ball several times to the same person when this practice starts. Pass the ball in one direction, first to the right and then to the left. Increase the height of the pass as the players develop in skill.

2. To add a little fun and competition to this practice have the players divide into groups. Give each group a ball. On the signal to "Go" each group will start passing the ball within the circle without stopping. The object is to see which group is able to make the greatest number of passes within its circle, without having the ball touch the floor. Each group audibly counts the number of passes successfully made.

Variations in this event include: letting players hit the ball more than once in succession; seat the players on the floor in close formation using short passes, placing one player in the center and having the ball passed to him before being played by another.

3. The following series of practice suggestions will be helpful in giving variety to the period. Two players face each other about ten feet apart. Pass the ball back and forth, the pass being twelve feet high.

4. For accuracy two players stand ten feet apart astride a line on the floor. Pass the ball back and forth, seeing if they can keep the ball straight with the floor line.

5. Two players stand alongside of the net on the same side. Using the net as a guide, pass the ball to each other keeping the ball close to the net.

6. Two men face each other on opposite sides of the net about five feet back from the net. Pass the ball over the net to each other at a height of twelve feet at first, then ten feet. After practicing this for several minutes see if the players are able to pass the ball so that neither will have to move in getting the ball.

7. Two men stand close to the net on opposite sides. Practicing passing in such a manner that it will just get over the net. This is an excellent procedure for control of the ball.

8. Two players face each other about ten feet apart, having a basket ball goal between them. Pass the ball over the goal to each other.

9. Have one player (A) stand under the basket ball goal and another (B) about ten feet from the goal. A tosses the ball to B who tries to pass it into the basket. Let each player have ten trials in succession.

10. Two players stand beside a wall facing each other, about fifteen feet apart. Pass the ball back and forth to a marked height on the wall. This is also an excellent individual practice stunt.

11. Player A stands back of the end line of the court. B stands fifteen feet in front of him with the ball. B tosses it to A, using a twelve foot height throw. A then passes the ball forward to the net or over it if possible. This is valuable for strengthening the fingers, wrists and arms and also helpful in developing gross power on the pass. A follow up of this stunt would be to have player B bat the ball to A from the fifteen foot limit, and then gradually increase the distance until the pass was made from the net by B.

12. Have the back line in team formation. The ball is served from the opposite court to each player of the back court in turn. The men in the back court pass the ball to the center forward position, using a pass which is at least fifteen to twenty feet high. After this is mastered have them send the pass to the right forward position.

13. A throws the ball into the net. B stands beside it bending down in such a position as to be able to recover the ball as it drops from the lower limits of the net. First throw the ball into the lower quarter of the net. It will be noted that the ball hangs in the air a bit when it comes from this area of the net. It is not difficult to handle. Next throw the ball into the middle of the net and repeat the practice of recovering it; the ball comes off the net at this point more rapidly. Lastly throw the ball into the upper part of the net. It will be noted that its downward flight is with increased tempo. This calls for some quick playing on the part of the player who is recovering the ball.

14. Stretch a string across the court four feet above the net and six inches in from the net. Have the set-up men practice setting up the ball to the height of the string. If the string interferes with the play suspend an object from the ceiling placed at the desired height to be used as a target for the passing practice.

15. It will be well for a coach to spend some time with his players in practicing the recovery of balls, using the scoop or underhand pass. Use the same practice formations previously suggested, giving special emphasis on the use of the fingers in making the pass.

TESTS

The teaching process may be greatly aided by the use of tests which stimulate interest on the part of players. It is through this procedure that one may learn the individual ability of each player and thereby be able to classify him, especially in terms of weaknesses. Player interest is usually increased when he is shown his present ability, and then given an opportunity to increase his skill and note the improvement. It is understood that the fol-

lowing test procedures have not been statistically proven to be valid. They are used as simple procedures to note general ability in the specific techniques of the game.

1. *Proper Handling of the Ball.*

This test will be helpful in locating weaknesses in the reception and handling of the ball. The object of the test is to discover if a player can send a ball in a definite direction.

First toss the ball from the center of one court to the back center position of the other where "A" is ready for the test. Have him pass the ball toward the net with some height. Tabulate the scores of ten plays on the following basis:

10 points for passing the ball forward toward the net at a height of ten feet or more; 5 points for passing the ball forward toward the net under eight feet in height; 0 points for a poorly handled ball that goes off to the side or goes forward with speed.

Serving the ball in the regular prescribed manner will add to the difficulty of this test, but will more nearly approximate playing conditions.

2. *Handling the Ball for Beginners.*

Mark off one half of the court for this test as follows: a rope ten feet high is stretched parallel with the net and fifteen feet from it. The three front areas of the court are outlined with chalk and have the following values in points:

Right forward	10 points
Center forward	20 points
Left forward	5 points

The player A taking the test stands in the right back area of the court. The tester B stands in the center forward area with the ball. Have the tester toss the ball over the rope in the middle of the area to A who endeavors to pass it back over the rope having the center forward area as the target or objective of his pass. Score points according to where the ball hits the floor. If A fails to get the ball over the rope no points are scored, the same being true if it hits the net or goes out of bounds. A has ten trials to determine his score in passing ability. For a change in this test use the eight foot volley ball net instead of the rope. Have A on one side of the net and B, the tester, on the other utilizing the middle sections of the volley ball court.

3. *Handling the Ball for Advanced Players.*

To increase the difficulty of this test, have the tester B stand at the middle point of the opposite court or serving area from A, and either toss or serve the ball to A who would attempt to pass the ball over the ten foot rope and into the center forward area. The following divisions of this center area

and the right and left forward areas could be scored the same as in test 1, or as follows:

The front ten feet of the center forward area score 20 points; back five feet, score 7 points; right forward area, 10 points, as this is a better placement for the ball for recovery than the center back area; the left forward area, 5 points.

4. *Passing for Distance Test.*

The strength and ability to pass the ball forward is important. The following test will indicate just how the various players measure up to this requirement:

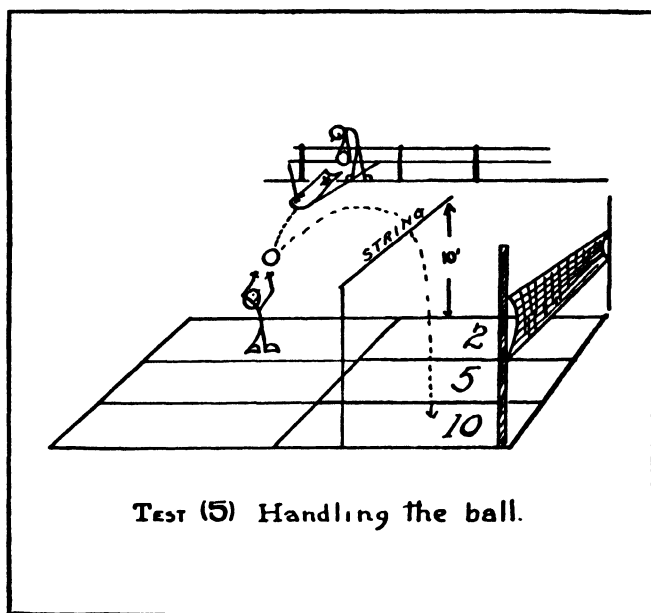


Diagram 8. Test (5). HANDLING THE BALL

Tester B stands adjacent to the net and in the center forward area facing A, who is standing on the end line of the court near the center. B tosses the ball to A, who then passes it as far forward as possible.

Scoring: If ball does not go over the net, 0 points; if the ball falls within ten feet of the net on the far side, 5 points; between ten and twenty feet, 10 points; between twenty and thirty feet, 15 points; over the end line, 20 points.

5. *Handling the Ball, Control Test (Diagram 8).*

Equipment: Trough, old tin pipe. Diameter, ten inches; length, five feet; projection from balcony, four feet. Pitch, eight to ten inches in five feet. Height from floor at points of drop, thirteen feet; distance back from the

net, twenty-two feet. String, height from the floor, ten feet; distance from center line, ten feet.

The test: B places the ball in the trough at point X. When A is ready the ball is released without any application of force. A receives and passes the ball forward over the string into the right forward area. Ten trials.

Scoring: Passing over the string and landing in the right forward area, 10 points; over the string and landing in the center forward area, 5 points; over the string and landing in the left forward area, 2 points; under the string, into the net or out of bounds, 0 points.

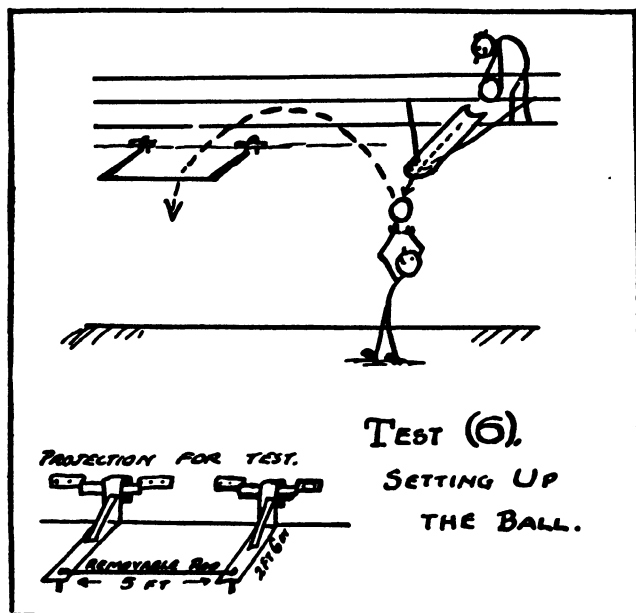


Diagram 9. Test (6). SETTING UP THE BALL

In scoring note the misplacements by the following initials after the scoring: o—is out of bounds; r, or l—right or left; u—under the string; n—over or into the net.

PASSING TEST											
Trials.....	1	2	3	4	5	6	7	8	9	10	Total
John Jones.....	10	0 ^{or}	0 ^{rn}	0 ⁿ	0 ^{lo}	0	0 ^{ro}	0 ^{or}	0 ^{ur}	10	20

In looking over the record of John Jones, we find that, in the majority of cases in his attempts to place the ball in the right forward position, he sent

it either out of bounds or under or into the net. Show him his record and bring to his attention that he needs to put less power in his passes and more in height and control. Scoring the points alone will not tell the whole story.

6. Set Up Test.

Equipment (See Diagram 9): The set-up for this test is easily made in any workshop. The trough is the same as used in test 5. The placement the same. To the left and nine feet from the trough is a rectangular projection five by three feet, which is placed ten feet from the floor. B places the ball in the trough and lets it fall. A receives the ball in such a manner that it will fall into the goal on its downward flight.

Scoring: Into the goal without touching any part of the fixture—10 points; over the goal and hitting the near projection on the descent—5 points; over

RECORD OF PLAYER IN ACTION																	
NAME.....																	
POSITION.....																	
	THE PASS						THE SET UP						PENALTIES				ASSISTS
	From Easy Ball			Difficult Ball			From Easy Ball			Difficult Ball			Touching Net	Over the Net	Over Line	Out of Position	
	Good	Fair	Poor	Good	Fair	Poor	Good	Fair	Poor	Good	Fair	Poor					
POINTS....	5	3	0	10	5	1	5	3	0	10	5	1					
1st Game																	
2nd Game																	
3rd Game																	
Total.....																	
Remarks..																	

the goal and hitting the five foot rod on the descent—2 points; hitting the wall, far projection arm and under the goal—0 points.

7. *Set Up Test.*

Equipment: a five by three foot frame built of two by two inch material. This frame is hung ten feet above the floor in a horizontal position and is supported by light ropes.

Scoring: the same as the test. The tester B stands in a balcony or on a ladder about fifteen feet above the floor and drops the ball to A who is directly under him and six feet away from the hanging frame or goal. A of course sets the ball up using the goal as his target.

8. *Record of Actual Play in the Game.*

Rating a player while he is in action is another valuable asset in studying the abilities of individual players. While this technique is not a test like the preceding series, it does offer a splendid opportunity to note the flaws in individual play. Many coaches in other games utilize this procedure with their players and find it an invaluable aid. If a player is continually at fault at one point and a study shows this, it should be a stimulus to him to improve and correct the weakness.

In checking a player, the recorder places a dot in the column describing the results of play as indicated on the "Record of a Player in Action." If special notations are to be made, these should be done during time out.

SERVING THE BALL

As in tennis, the serve is the first play of the game. In the men's game the ball must go over the net without any assistance, while in the women's game, one assist is permitted if agreed on by both captains.

The serve is receiving much attention today on the part of coaches and players. Not long ago the objective was merely to get the ball over the net. Today careful consideration is given to the correct placement of the serve as well as to curving and adding speed to the ball.

The author of this text has a conviction that a team will have a greater chance to win if it uses what is known as a hard or overhand serve, rather than the easy or underhand serve. The serve is such an important part of many ball games that it would seem advisable to spend much time in developing this part of the game. Every player should know the techniques of both the underhand serve, or easy serve, as well as the more difficult overhand power serve.

The disturbing factor in the power serve is that it takes months and years of practice to become proficient in its use. This is a stumbling block, for it is difficult to have players take time for the practice necessary to reach the point where this type of a serve is considered as safe to use. Once a team realizes the value of this service it will not begrudge the extra effort it takes, especially if the practice periods are made interesting.

The use of the block as a defensive play may give the coach of a team who uses the safe-serve something to back him up. Before the block was used extensively, an easy serve meant that the ball was returned to the serving side in a killing play by the attack, which generally ended in a loss of the serve. Today, however, the use of the block has stopped many of these "sure kills" as the ball is recovered from the block to be played again by the serving side. However the point is emphasized again, that the chances for a perfect one-two-three play by the receivers of the serve are enhanced when the ball is served with speed and curve and placed in the most difficult position to recover.

The following techniques and methods of serving the ball will be helpful:

THE UNDERHAND SERVE

All players should be able to serve the ball using the underhand method, for it is the safest way to deliver the ball into the opponents' court. When a player finds that his overhand serve is out of control he should shift to

the underhand delivery. Beginners should be taught the underhand serve first.

To teach a player how to serve the ball, have him stand about twenty feet in front of a wall and practice the serve against it until he masters the fundamentals. When he has learned these preliminary skills he is ready to go on to the court and practice serving the ball over the net. Before practicing the serve on the court it is well to take a few minutes to explain the general serving rules, which are:

- A. In serving the ball a player must stand back of the serving line.
 - B. He stands within ten feet of the corner of the court.
 - C. The ball must not touch any object or fixture of the net before it lands in the opponents' court.
 - D. The ball must land either on or inside the boundary lines.
- A spirit of encouragement should predominate the teacher's coaching procedure. This should be accompanied by a progressive series of hints and coaching points which aid the beginner in his learning process.

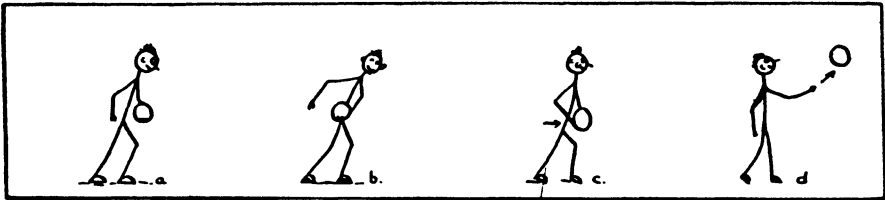


Diagram 10. THE UNDERHAND SERVE

The technique of the underhand or easy serve is as follows: take position facing the wall or net with the left foot advanced about ten inches. As in position "a," (Diagram 10) hold the ball in the palm of the left hand, fingers pointing to the right, thumb forward. The left knee is slightly bent while the right is straight. Swing the right arm back and at the same time increase the bend in the left knee. The left hand which holds the ball also moves backward, with the body giving a swaying movement as in position "b." Now swing the right arm forward and hit the ball off the left hand with the palm and heel of the right hand, position "c." The hips are raised and the back slightly arched which gives power to the serve. After hitting the ball continue the follow-through with the swing of the right arm as it goes forward and upward, which gives height to the ball. The right arm stroke should be in the anterior-posterior plane, or directly forward and back. Many beginners have the fault of swinging the arm in a sideward swiping action. This is to be corrected as soon as possible, as the side arm serve is rather difficult to control and should never be used by a beginner. Another error by beginners is to toss the ball into the air before it is served. This increases the difficulty of the movement and is unnecessary, as it is

much easier to hit the ball off the hand. The confusion comes in the pupil's mind in his desire to avoid hitting the hand.

For one to intimate that all underhand serves are easily handled would be a mistake, for it is possible to hit the ball served in this fashion in such a manner that it will be difficult to control on its reception. Most of the derogatory remarks pointed at the underhand serve are aimed at the type of service which merely floats over the net. Consider the possibilities of the following:

1. The "Out" (Diagram 11).

The stance is the same as previously mentioned. The ball is held in the left hand with the valve to the right. Swing the right arm back and then forward with a driving action. The arm and hand come forward with the thumb leading and the fingers pointing downward. Hit the right side of the ball with the palm and fingers in a twisting movement made possible by rotating the arm and thumb inward toward the body. If the ball is contacted with enough force and the above movement is executed properly, the path of the ball will describe a perfect baseball "out," going from right to left. This serve is effective if aimed to the right of the center back, as it confuses players in the back positions as to who should go after the ball. It also serves as a change of pace service for the overhand server as well as being a comparatively safe serve to use.

2. The "In" (Diagram 11).

The action of this serve is opposite to that of the out curve in respect to the action of the hand and arms. It is a difficult curve to manage and calls for much skill and control. Hold the ball with the valve facing to the left. The preliminary arm movement is the same as for the underhand serve, but, as the hand approaches the ball on the forward swing it is rotated outward to the right, and the ball is hit on its left side with the palm of the right hand, with the little finger leading the action. It is wise to be sure that a server's arm is thoroughly warmed before attempting this serve, in view of the extreme twisting necessary to deliver the ball. The path of the ball will be from left to right.

3. The "Drop."

The ball is held in the left hand, palm up with the valve down, the arm is raised forward and upward to a position in front of the right shoulder, with a slight flexion in the elbow. The right arm swings backward in a near horizontal plane, with the palm turned upward. It comes forward in the same relative position. The resulting action is a swipe or cut under the ball which imparts a reverse spin; this sends the ball forward into the air in an ascending arch, but as it reaches the rear area of the opposite court the "english" on the ball, meeting with air resistance, makes it drop. It is difficult for the opposition to determine whether the ball will go out of bounds or not if the serve is played close to the back line. The action of the

player making this serve is similar to the movement of a football player making a forward pass.

4. The "Mystery" Ball.

Using a regular preliminary movement, the hand comes forward hitting the ball in the middle of the back with the heel of the hand. Simultaneously with this contact the hand is abruptly removed or withdrawn from the ball. The ball drops, zig-zags, curves, floats, in fact is liable to do anything.

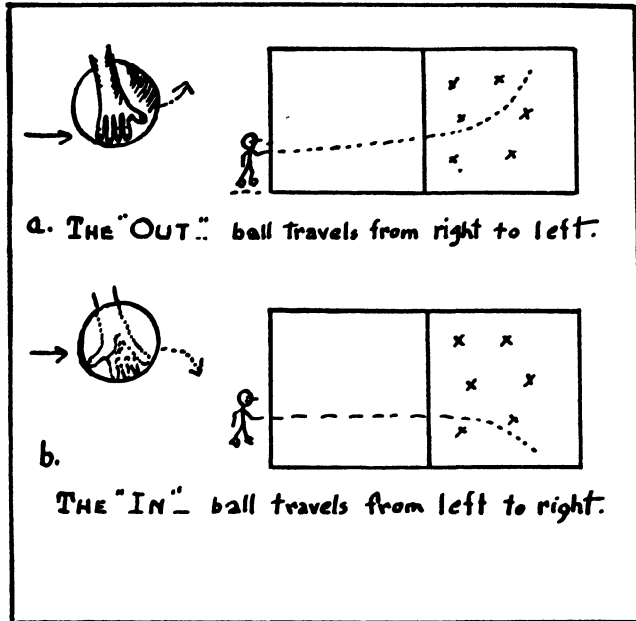


Diagram II. UNDERHAND CURVES

5. The "Knuckle" Ball.

Keeping the palm of the hand extended to its limit, flex the fingers so that the extreme parts of them are folded back resting on the upper part of the palm. The thumb is parallel to the fingers. Swing the hand forward, hitting the ball in such a manner that the finger nails and heel of the hand will be the main points to touch the ball. The resulting action is a floater which is a jumpy, curving ball.

6. The "Back Hand Serve."

Instead of hitting the ball with the palm of the hand, close the fist and hit the ball with the back of the hand. Many use this serve but it is obvious that one will not be able to have a great deal of control over the ball.

7. The "Fist Ball."

The fist ball is used when a person has trouble in getting the ball over the net with the open hand. Flex the fingers and hit the ball with the closed fist, thumb to the right and fingers clenched on the upturned palm.

8. The "Front Fist Ball."

Instead of hitting the ball described in the section above (7), rotate the arm inward so that the thumb is pointing downward. The ball is hit with the thumb extended and the first finger flexed.

THE OVERHAND SERVE

When a player has mastered the underhand serve he is ready to progress to the overhand serve. The fundamental techniques are not difficult and most people readily learn how to deliver the ball over the net with this method. Diagram 12 illustrates the basic positions in the serve.

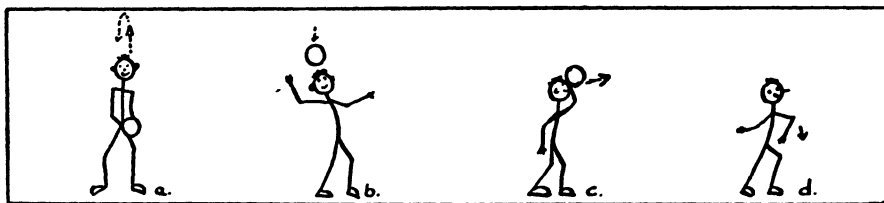


Diagram 12. THE OVERHAND SERVE

The correct stance for each player will vary, but in teaching the game to a newcomer advise him to stand facing the court rather than having his side or back to the court. These variations are advanced techniques and have no place with the beginner. Place the feet in such a manner that the heels are about ten inches apart with the left foot slightly advanced. This gives a good base for action. Hold the ball in front of the right hip with both hands. The arms are flexed to a comfortable position, about forty-five degrees. Bend both knees to start the movement and then toss the ball into the air directly over the head, to a height between a minimum of two feet and a maximum of five feet. See position "a," in Diagram 12. If the ball is hit while directly over the head, the general direction of the serve will be upward. The further it is thrown in front of the body the greater the tendency for the ball to go directly forward, and many times downward. One is also more liable to foul by going over the serving line in attempting to hit the ball when it is tossed too far forward. The low height of the toss does not permit the ball to gain any appreciable momentum in its downward flight. This factor is an aid to the server. The habit of throwing the ball high into the air is likely to add to the difficulty of the serve, for the ball will travel faster when falling from the greater height and it is more

difficult to properly place the ball for the serve. Many times there are obstructions over the serving areas which tend to upset players when they are not permitted to continue with their regular acquired serving habits.

As the ball ascends raise the right arm up and back, turning the body slightly to the right. This will bring the upper arm in a horizontal position with the fore arm flexed and pointing upward and back. See "b," in Diagram 12. Coach the player to keep his eyes on the ball at all times during this movement. The back is arched and the hips are forward. The position of the server at this point is comparable to the catcher in baseball who is ready to throw the ball to second base. This coaching point may be of assistance in teaching this type of serve to those players who do not seem to develop the ability to master the serve.

As the ball descends, bring the right arm forward and hit it at a point which is in line with the top of the head and to the right of it. Hit the ball with a cupped hand so that the palm, heel and five fingers of the hand get into play. The fingers will be in a slightly flexed position. When the hand makes contact with the ball, the following action takes place in the rest of the body; the right leg straightens, swinging the right hip forward; the body twists to the left bringing the right shoulder forward; the upper arm is brought forward and the lower arm is kept in a flexed position and rotated to the left by the movement of the upper arm. The wrists snap forward at the last instant like the final action of a shot putter.

If the serve is correctly executed it is a highly coördinated movement in which all parts of the body are involved. It is not a matter of just hitting the ball with the hand and arms alone. After the ball has been hit in the manner described above, the right arm continues on in a follow-through movement to the left, see "d," in Diagram 12. If the server puts a great deal of body weight into the serve it will be necessary for him to step over the serving line in following through after the ball has been hit. The rules permit this, providing no part of the body has touched the line or passed over the area above the line, prior to the time the ball is hit over the serving line. For beginners it will not be necessary to change the foot position a great deal.

In coaching the overhand serve, see that the ball is properly controlled in the preliminary movements of the serve. Also be on the lookout for the following weaknesses and check them when they make their first appearance.

A. A tendency to throw the ball too high.

B. A tendency to throw the ball forward so that the server must launch forward to get the ball. Some players develop the habit of a "putting" or "pushing" action rather than a direct hit.

C. Throwing the ball too far to either side or too far back. The ball thrown directly over the head will yield best results.

D. Too much body twist which sends the ball to the sidelines.

E. Avoid the straight arm action serve for beginners. Stress the bent arm, "catcher's peg" action.

F. Discourage the use of the fist ball for beginners.

G. Encourage men to work for control over the serve rather than having them develop a wild swinging serve that scores occasionally.

Curves may be added to the retinue of the server. With speed and a good overhand delivery well placed, the opposition is put at a greater disadvantage than when the ball is lobbed over to them. While difficult serves are increasingly handled with ease by many good players, in the long run the consistent use of this method is bound to bring results. But this will come only after much practice calling for patience and determination to master a skill which few players have today.

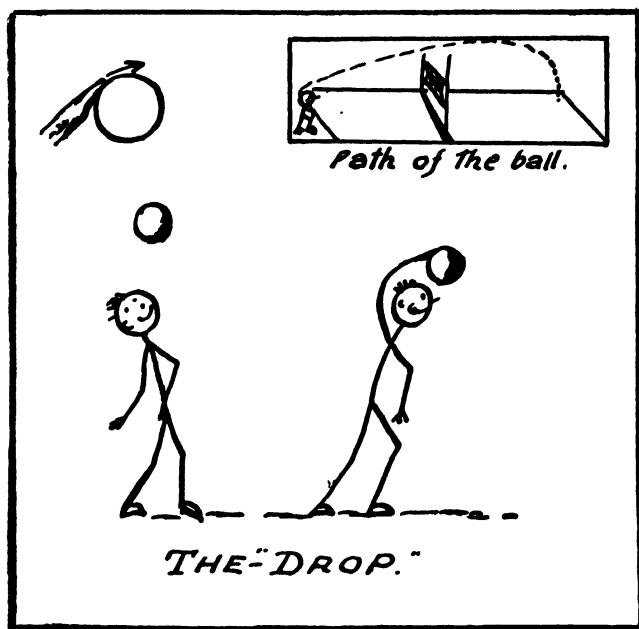


Diagram 13. THE "DROP"

The same techniques for curving the ball as previously described in the underhand service are also applicable with the overhand serve. The "out," "in," "drop," etc. curves are secured by the same techniques.

1. "The Drop."

Another method is used with the overhand serve to make the ball drop. The technique of this serve is difficult to learn in the early stages as it calls for a highly coordinated movement. (See Diagram 13.) The ball is thrown up as for the regular overhand serve. Hit it in such a manner that the finger tips make first contact with the ball on the posterior upper half. Then the heel of the hand follows in quick succession with a forceful impact which

sends the ball forward with a clockwise spin on it. The body action is either a backward bend using the regular stance or a sideward bend when the server stands with his side to the playing court. As the arm takes its forward and upward circuit to hit the ball, the body straightens and then continues on in the opposite direction, giving power to the serve. Time spent practicing this method of serving will be well repaid, for when the serve is working the forward spin of the ball causes no end of trouble for the receiver. The dropping action and forward spin of the ball tends to make the ball slide off the hands of the receiver.

2. "The Floater."

This is an easy and effective serve. It is not difficult to control once the essentials are mastered, and a good player should be able to average about as well as with the underhanded server. This serve has peculiar properties

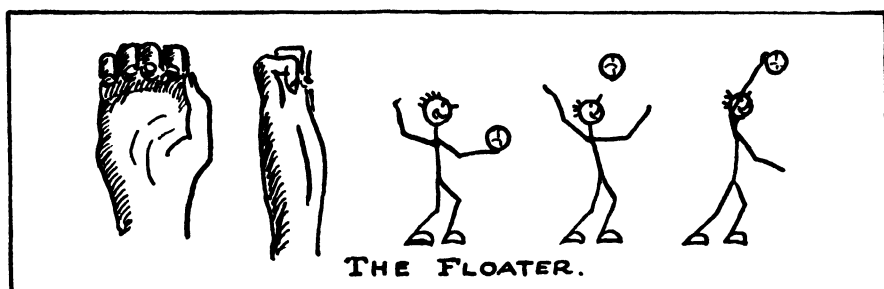


Diagram 14. "THE FLOATER"

which make it jump or drop, no one knowing which action is liable to take place. Many times the serve results in causing a poor pass to be made from the back line, and consequently greatly threatens the efficiency of the attack. (See Diagram 14.) The diagram illustrates the correct placement of the hand and fingers. The ball is not thrown very high, and should be struck with the heel of the hand and first knuckles of the fingers so as to hit it in the dead center or slightly above. Too much speed reduces the control and also the floating qualities.

One advantage of the overhand serve is that much more power and speed is at hand to use with the curves.

MISCELLANEOUS SERVES

There are a number of miscellaneous serves which also may be added to the list of possibilities. Every now and then a player will possess special ability in his own individual style. In such cases he should be encouraged to practice to make his serve more effective. It is well to discourage the beginner from deviating too much from the generally accepted serving

techniques. Once in a while one of these freak servers will "ace" a ball and ever after he will be banging it all over the place. It is this type of action which has brought about the storm of disapproval for the use of the hard overhand serve. The following types are presented in principle only, with no attempt to describe the specific techniques of each serve, as they will vary with each player who attempts to serve in this manner.

1. The Side Arm Swipe.

Tall players are more able to use this to advantage than shorter men. At times this serve is most difficult to control. The ball is held and thrown up to one side of the server as the arm swings backwards in a slightly flexed position in the horizontal plane. The forward action of the arm is a sweeping movement, with the arm in a near horizontal position. It is noted that when the ball is hit in this serve it is quite a distance from the main line of the body and necessitates exceptional control.

2. The Push Ball Serve.

The ball is thrown in front of the body and the arm comes forward in a regular shot-put action.

3. The Side Bend.

The server stands with his left side to the net, feet astride. The ball is thrown up over the head. The body bends sideward to the right with the right arm dropping downward. The body action is reversed and the right arm swings upward and over the head, hitting the ball high, thus imparting a tremendous spin to the ball which gives it the dropping action at the end of its flight. This is a very satisfactory method of serving but takes a great deal of practice and patience to acquire the necessary skill to control it.

4. The Freak Serve.

The server stands with his back to the net, throws the ball up over his head and hits it with a terrific swing brought about by twisting to the left and at the same time bending the body backward. This is another serve which imparts overspin to the ball causing it to drop.

5. Statue of Liberty Serve.

Some players eliminate tossing the ball into the air prior to hitting it on the serve. The ball is held high with the left hand and arm straight. The right arm swings backward and then forward to hit the ball off the hand. While the action of this serve is limited it is one in which a player has excellent control over the ball.

THE PLACEMENT OF THE SERVE

There are certain areas and positions from which it is more difficult to properly handle the ball. (See Diagram 15a.) When the opposition is in this formation, the first choice on correct placement would be to send the ball into the right back area. A second choice would be to send it to the left back area but never to the center area. Note that the standard play should go to the center forward, who sets it up for the attack in the left forward position. The set-up will need to turn away from his partner to recover the

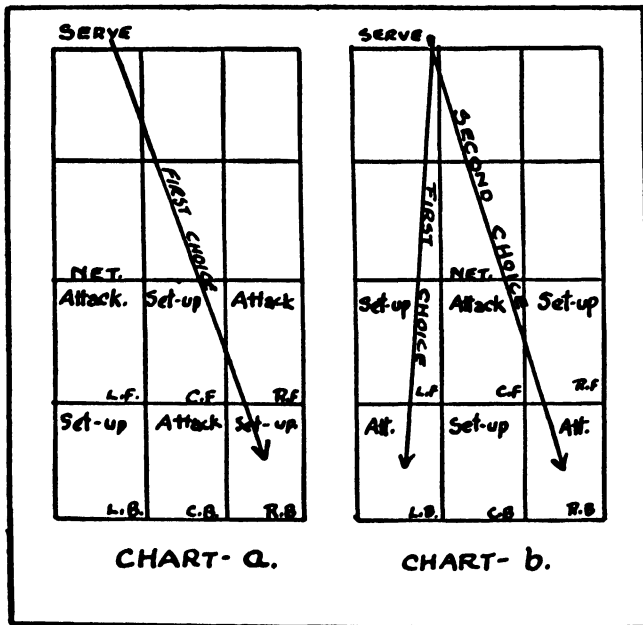


Diagram 15. PLACEMENT OF THE SERVE

ball. If it is served in the center or left back positions this would not be necessary.

Diagram 15b is the second formation which a server encounters. In this case the first choice is to send the ball to the left back area. From here it will take a long pass to the set-up who is in the right forward position. The second choice would be to the right back but unless the ball is in the far corner it is not too effective.

In general, a ball served to the far corners is always a better placement than to any point in the center of the court. Sometimes it is possible to drop the ball over the net to the middle of the opponents' court and near the side

lines. Other times players come too far forward or too far back and chance shots into these seemingly open places cause concern in the recovery of the ball. It is well to keep in mind that any play which causes the opposition any extra effort at all is worthy of consideration. The placement of the serve between two players is much more effective than directly at one of them.

GENERAL CONSIDERATIONS

The best possible position to take in serving the ball is near the ten foot mark; that is, the inner boundary of the serving area. This position gives one the advantage of being at a point which is nearest to the far corner, right back area, and at the same time having the greatest angle for a delivery into the left back area of the opponents' court. This will save many out of bounds plays aimed for the left back court.

The server should always take a quick glance before he serves to see that all of his teammates are in their right positions. At the same time he should get the habit of looking over the position of the opponents and making up his mind exactly where he wants to serve the ball. Seek the location of the set-up and the attack.

As soon as the ball is served, the server immediately comes into the field of play getting into his correct position for the defense. Many times a player is caught flat-footed after the serve because he is more concerned with seeing what happens to the serve than with getting into position for the return play. Serve the ball, run into position and then pause if there is time to study the results of the serve. The server comes forward about ten feet or more into the court and lines up between the right forward position and the center back.

If the first serve is successful it is well to have the server's teammates recover the ball for him rather than for him to run after it. This will give him a chance to relax and get set for the next serve. It is also important to coach men to make their first serve sure if possible.

Opportunity for scoring comes when the ball is in control of a team. The serving team should recognize this as a very important point, and make the serve as effective as possible.

Every player should take special care of the condition of his muscles. The arms, legs, and body should be "warmed up" gradually by preliminary exercises. It is folly to let players attempt to serve the ball without some method of using the arms and legs in preliminary movement. A pulled muscle due to its being cold is not good head work on the part of the coach or player himself.

Sprained and bruised fingers are the source of much discomfort and annoyance. The hard serve will be the cause of these injuries. The toughening process calls for a series of conditioning work in passing and recovering the ball.

PRACTICE SUGGESTIONS

There are no short cuts in learning how to serve effectively. A player must practice regularly in order to improve his control of the ball in its placement and to be able to develop speed through increased power. The following variations will add change to the practice routine:

1. Chalk in the boundaries of the regular areas of the court and use these as goals or targets during practice periods.
2. Practice in turn each of the following methods of serving—the underhand serve, getting the ball over the net, hitting the ball with the heel of the hand, using the knuckle ball, curving the ball with an “out,” an “in,” and the “drop.” Using the overhand serve, start with hitting the ball over the net using the regular methods, then try the “floater,” the “out” and the “in,” spending much time on the overhead “drop.”
3. Place a peach or waste paper basket in the center of the right back area and see how many players are able to hit the basket with the serve. Then change to other areas.
4. Have the opposing team line up in position to receive the serve. Practice serving the ball between any two players. If men are not available place chairs or padded coat racks in the positions.
5. With the three back positions covered, serve ten balls as in a game. Use the center forward area as the target and have the receivers of the serve pass the ball forward to this area. Keep count of the number of balls which are handled with a degree of accuracy and passed to the center area.
6. Have men serve the ball from different positions along the serving line at two foot intervals. Start at the corner and work in.
7. Have each player practice throwing the ball at different heights in order to learn the height which is most favorable for his particular style of serving. Record this and place a hanging target over the serving area. This should be arranged so that it could be lowered or raised for other players.
8. With a squad of ten or more men put four balls in action during this part of practice. This will speed up the period and prevent players from being bored while waiting for the ball. Do not let players fool around in trying out freak serves. Someone is liable to get hurt and in general this type of serving is wasted time.

TESTS

The testing procedure takes time but it pays dividends in the objective study of each player. It gives an index of the players' accuracy and also is a stimulus for improvement. The majority of players will try to better their previous records when they have something to aim for.

1. Chalk off the following areas in the court. Time may be saved by

placing tacks or painted marks on the court at the places marked "x" in Diagram 16.

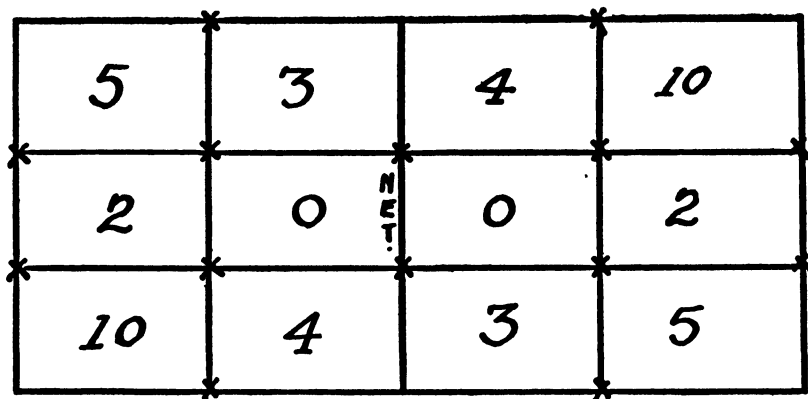


Diagram 16. PLACEMENT VALUES

Let each player take ten serves using the underhand serve. Grade him according to where the ball hits the floor. It will be well to note where the ball goes when it does not land in the target area.

If it hits the net, record 0ⁿ

If it goes out of bounds at the end, 0^e

If it goes out of bounds on the side, 0^s

Name.....	1	2	3	4	5	6	7	8	9	10	Total
John Jones.....	0 ^s	5	5	3	2	10	10	0 ⁿ	0 ^s	2	37
Ned Smith.....	10	10	10	0 ^s	0 ⁿ	4	0 ^s	10	4	10	58

From the tabulation it is obvious that Jones is having a hard time to get the ball to the right back position. Most of his serves have gone to the left half of the court. The test indicates that Smith is able to place the ball correctly half of the time. His serves go in the right direction but are poorly placed.

2. Repeat the same test but have the players use the overhand serve. Score the same as previous test.

3. Explain that the set-up of the opposition is in the center forward position. Score points according to chart a, Diagram 17. This test is used to emphasize the value of correct placement when the set-up is in the center position.

4. The opposition has the set-up in the right forward position which changes the value of the placement in the right back position. The left back must make a long pass to the set-up while the other two positions are relatively near. (Chart b.)

5. Place a bushel basket or chair in the center of the right back position. Give each player five or ten chances to hit the chair or basket. Score five points for each hit. If a basket is used, score ten points if the ball goes into it. Repeat this set up in the left back position.

N E T	ATTACK	10	CHART a. special test for placement.
	SET-UP	2	
	ATTACK	0	
N E T	SET-UP	2	CHART b.
	ATTACK	0	
	SET-UP	10	

Diagram 17. PLACEMENT TEST

6. Curve Tests:

a. The "out," "in," "drop," and "floater."

Every player has ten chances with each serve. The main object is to have the player curve the ball regardless of placement. Score as follows: If the ball has a slight curve in the desired direction, score five points; if it has a marked curve of any kind score ten points; of course, it is understood that the test calls for subjective judgment on the part of the tester but the main object of the test is not to evaluate the degree of the curve primarily, but to study the ability of each player and further to have each player realize the possible values in such serves.

7. Grading a player while the game is in progress is the best method of testing for it gives the story of how a player reacts at the time when it

counts. A player might score very high in practice testing yet rather poorly in a game. It is also important that several tests be given rather than depend on the one test or one match. A player may be off on the day of the test or match and his scores will not be a true picture of his ability. It would be unfair to classify him on this basis. This is one of the dangers of the testing; namely, that retests are not given at frequent intervals, which after all is the main reason for testing . . . to mark progress.

The following chart which is kept by placing dots in the proper column will present a good picture of a player in action.

SERVING TEST										
	Hit Net	Foot Fault	Out End	Out Side	Just Over	Over Speed	Placed	Placed Speedy	Ace	Total
Scoring	0	0	0	0	1	4	3	5	10	
John Jones . . .	• •	•	• •	• •	• •	• • •	• • •	•	• •	68
Ned Smith . . .										

SERVING TEST

From the above chart, Jones is just hitting the ball. He has four correct placements, ten misses, ten balls over the net and two aces. Only two aces and four placements in twenty-six serves does not give him a good rating. His attention should be called to his weaknesses.

Keeping a record of the results of the serve on its reception would be another helpful addition to the study. Scoring as follows; if the serve is easily handled and passed forward for an easy set up, score 0 points. If the serve is placed well and difficult to handle, score 5 points. If the serve is difficult to handle resulting in a poor set up and attack, score 7 points. Aceing the ball, score 10 points.

TECHNIQUES OF THE ATTACK

The third and final play of the ball on one side of the net is known as the "attack." Some sections of the country call it the "spike" or "kill." Regardless of name, it is the most spectacular and colorful part of the game. A spring into the air with the ability to hit a moving ball over an eight-foot net with such force and direction that it will evade the opposition is thrilling to see. This coordination is one of the finest in any of our athletic games. With the development of the block, the attack is now faced with the additional problem of getting the ball by a fence of hands which are placed in front of him at the top of the net.

FUNDAMENTALS OF THE ATTACK

Players who aspire to the attack position must first of all have considerable power in their legs. Continuous jumping is necessary over a long period of time which calls for endurance and stamina. The player must have the ability to coordinate several movements into a smooth effective play. He must possess keen insight in sensing the actions and the positions of the opponents while he is in the air ready to hit the ball into their territory. Therefore men who lack that dynamic ability to cut loose should be encouraged to play the position of set-up.

In view of the requirements of the position, attack players should spend some time in the early season in conditioning their legs. Running on the toes, leg exercises and jumping practice will add to the strengthening of these important parts. It might be well to plan for a general conditioning workout for all players during the preliminary practice periods. If this were done at the beginning of the practice session it would insure the proper warming up of all muscles thereby eliminating the danger of pulled muscles and much stiffness afterwards.

In presenting the techniques of the attack, it is well to start with simple movements and progress to the more difficult. The first object is to know how to hit the ball. In athletic activities it has been proven that the greatest arm power is developed when the arm is in the bent arm position. Explain to the players that the use of the straight arm in hitting the ball is not as useful as the bent arm. It is to be noted that in handling and serving the ball the bent arm action is used throughout. A second principle is that the ball should be hit on top in as many cases as possible. If it is hit on the lower half of the ball, it will tend to go up and out of the court, the same being true when it is hit directly in the middle of the back.

Hold the ball in the left hand, palm up in front of the left thigh with a straight arm. Bend forward slightly. The movement starts by lifting the right arm to the right side in a bent arm position, the elbow leading the action. The elbow continues upward and when it reaches the height of the top of the head, it changes direction and starts downward with a quick movement. This places the forearm pointing in an upward direction; however this position is maintained but for a split second as the forearm starts a snapping forward and downward course. As the arm comes down and the hand hits the ball there is an additional snapping movement of the wrist and hand. These combined movements give much power to the attack.

To quickly review the total movement: the object being to hit the ball off of the left hand from a fixed position. Caution the players not to throw the ball up and then try to hit it in this preliminary practice. The arm moves upward with the elbow leading. As it reaches the height of the head the elbow changes direction thereby starting a snapping, pegging movement which is followed by a downward and forceful drive of the forearm, the movement ending with the snapping, flexing movement of the wrist and hand. The ball may be hit with the fist, cupped, open hand or the heel of the hand. It is advisable, however, to use the cupped hand position in teaching the game to beginners. With these combined efforts the ball when hit should be driven downward toward the floor with such force that the ball will bound high into the air. There is a sense of elation in hitting the ball in this manner. It gives the prospective attack player an opportunity to "feel" what is in store for him when he is able to do this while in the air.

Have the players practice this movement until you are sure that they have mastered the technique of hitting the ball. Be sure to see that the elbow leads the action both upward and on the first downward movement. Watch for the snapping action and if it is not forthcoming, make corrections immediately. Do not let the men use the straight arm action of lifting the arm forward in batting the ball down.

After a player is able to hit the ball correctly, he is then ready to see what can be done in the air. Hold the ball in both hands about waist high and jump into the air with it. At the height of the jump release the ball and attempt to hit it while suspended in the air. The correct position for the ball when contacted in this practice stunt is approximately opposite the chest or a little lower. The object is to have the ball in such a position that a player will be able to hit it on top. A fault with this type of practice is that there is a tendency to throw the ball too high which means that the beginner goes after the ball with the straight arm action which is not desired. "Keep the ball in front of you" is a good admonition.

The coach is now ready to have the men face the game situation which calls for hitting the ball while it is moving. Prior to this time, the ball has been under the control of the player. The timing element now comes in as a most important factor. Toss the ball into the air and have the players jump and hit the ball down. It is now necessary for the player to reach for the ball and hit it while it is above or on a line with his head. At this point it

would be well to lower the net to about seven feet and practice the following suggestions in the net position.

At first, toss the ball so that the player will not have to run and make the attack, that is, the attack will be made from the standing position. As the ball approaches the attack, he will prepare to spring into the air. His stance is comparable to a broad jumper with the left side to the net, both arms are back, knees bent and the body is flexed slightly at the waist. (See Diagram 18.) The weight is carried on the toes ready for the upward spring. As the attack leaves the ground the right arm is raised so that the elbow is slightly above the shoulder and to the side, while the forearm is

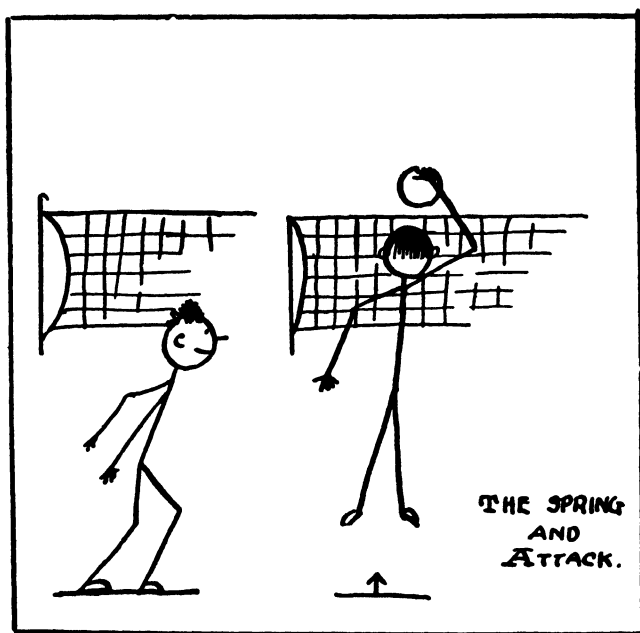


Diagram 18. THE STANDING ATTACK

raised in the anterior posterior plane to about a forty-five degree angle, the wrist is drawn back, the hand is cupped and facing forward. As the ball passes through the attacking area, the position in which a ball may be hit most effectively, the body comes forward and twists to the left, the shoulder is drawn in and down towards the body, the forearm moves downward and at the same time the wrist adds the finishing touch to the stroke as it snaps forward and downward on the upper half of the ball. In the spring the body is started in a slow turn toward the net. When the ball is hit the body executes a sharp twist to the left which brings the attack directly facing the net. This turn is assisted by the sweep of the upper arm and the snapping action of the forearm and the wrist. After the ball has been hit the player

comes to the floor facing the net or a little to the left. The twist of the body, the dropping of the shoulder, the final snap of the wrist are all fundamental in giving power to the hit.

To be effective the ball must be driven in a downward direction. Attacks which go out on a line are not helpful in gaining points for they usually land into the hands of the opponents. Of course it is understood that the beginner will hit the ball all over the court, but it must be kept in mind that the goal of the attack is to be able to pound the ball down in a driving manner so that the defense will not be able to recover it.

The preceding attacks have been made on balls which have been controlled, that is, they have been held by the attack himself or have been tossed into the air for the sake of accuracy by the coach or his assistant. Since the regular play of the game penalizes such actions it is necessary to approximate game conditions and have the ball set up in the regular manner for the attack. Now the attack must move over after the ball.

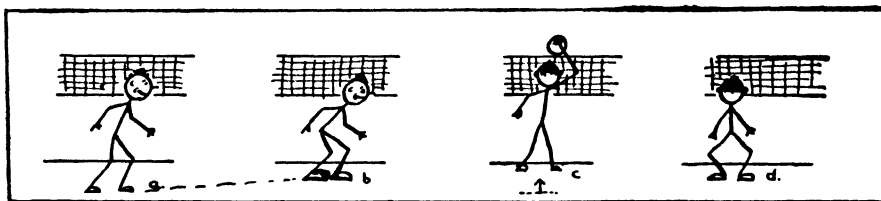


Diagram 19. THE RUNNING ATTACK

For the great majority of players and especially for the beginner it is not necessary for the attack to plan a long run or many steps to prepare for the spring into the air. The main drive is like that of the high jumper which comes in the last two or three steps. Having too much of a run will tend to pitch the attack into the net. You will note this with many beginners.

In teaching the attack to a beginner have the player face in a left oblique position on an angle about five feet from the net in the left forward area. The feet are on a line as the movement starts. Advance the left foot about two feet six inches, a comfortable step. The right arm swings backward to a full extension. The left shoulder and arm are brought forward (see Diagram 19), then a forward step is taken with the right foot about three feet two inches, followed immediately by a short step with the left foot of eighteen inches, (Note Diagram 20).

As this last short step is taken both knees are bent, the body is tilted forward and flexed at the waist. Both arms are flexed, the left to the left side of the body while the right swings backward in the flexed position preliminary to a sweeping upward swing when the jump is made. The feet are nearly twelve inches apart in the stance for the jump. The action of the feet prior to leaving the floor is comparable to the old "crow hop" that was used to get an extra assist in the standing broad jump, in fact the action of the

attack is most similar to the standing broad jumper as he gathers force in preparing for the jump. The right arm swings upward in a bent arm position, the legs and body straighten, sending the player into the air. As the attack approaches the height of the jump at the time he is supposed to hit the ball, the same arm and body action come into play as previously explained; namely, with a downward sweeping snapping cut on the ball. The beginner will have to take particular care not to get into the habit of going into the net after he has hit the ball. This fault will be avoided if he will continue his turn slightly to the left landing on both feet and at the same time preparing himself to be ready for any play which might be returned to him after he has hit the ball.

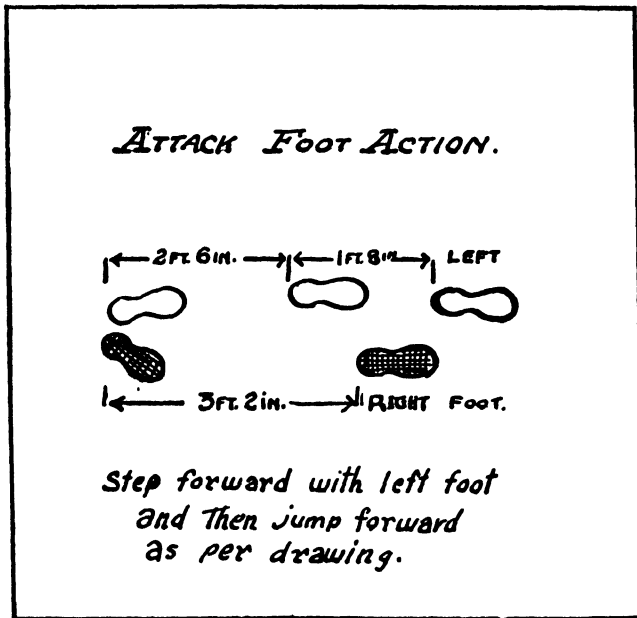


Diagram 20. FOOT ACTION OF THE ATTACK

In teaching the attack, the main fundamental is to teach men how to hit the ball. It is important that a powerful spike becomes the objective of every attack player. Placement and power are the two bywords of these men. Hence in the beginning stages it may be necessary with some players to let them hit the ball into the net, out of the court, in fact anywhere as long as they hit it with the right technique. If they do this they will be able to pound the ball. The matter of control will come as a progressive step. The coach must study the individual attack and work with him understandingly. With some the double footed action will not be satisfactory at all and the high jump take-off using one foot will be the other technique.

In the high jump the body is usually tilted backward in the attempt to place the body in the horizontal position. In the attack in order to get the right driving power the body is always in the forward tilting position and never in the backward bend. You will note that the tendency of the attack who uses the one leg drive is to lift the legs forward which will send the body back. On the other hand the one footed take-off of the broad jumper is quite comparable to the attack as he keeps his body in an upright position most of the time. At this point it is brought to the attention of the student of the game, the great coördination needed for this play: getting up into the air, controlling the body, changing the direction of the needed forces, hitting a moving target, directing it and then returning to the floor under control.

Another fault of beginners, and many old timers, is that of using the straight arm for pulling or pushing the ball. Instead of the bent arm action, the arm is extended upward and all movements in hitting the ball are with the arm in this position. This means that the drive or power comes from the shoulder. With the majority of players this means that it is almost impossible to hit the ball with any force and the resulting action is a weakly hit ball pushed or thrown. The last two are fouls.

ADDITIONAL STYLES OF THE ATTACK

1. The Straight Arm Attack.

Contrary to the above remarks many players use the straight arm attack effectively. This attack is quite different from the pushing action as it brings into play the bent elbow on the upward swing of the arm. At the end of the upward movement the arm is straightened and snaps down with the power on the ball. At the same time the body is turned toward the net which adds to the force of the play.

2. The Wind Mill Attack.

Here again the arm is used in the fully extended position when the ball is hit. In fact it is in that position throughout the attack. The arm starts in front of the body and swiftly describes a counter clockwise circle, the hand hitting the ball when it is about six inches above the net. This movement calls for great coördination and timing.

3. The Left-Handed Attack.

The same as the right except having the set up made from the opposite side. This style of attack is valuable as it upsets the ordinary defense and permits many playing combinations.

4. Double Attack.

It is at this point that the ambidextrous player gains the spotlight. The ability to jump into the air and hit the ball with either hand is a rare accomplishment and has been effectively executed by only a few players during the history of the game.

5. The Distance Attack.

This style of attack is a development of recent years and is increasing in use and popularity. Prior to the use of this method every ball had to be set

up near the net or the attack would not make any extended effort to hit it with any force. At present when balls are set up at any distance back from the net, up to ten feet approximately, the attack play the ball by jumping into the air and hitting it with a tremendous forward drive, imparting a cut on the ball by the use of the same technique as used on the "drop" in the overhand serve. Others use the technique of having their side to the net when they hit the ball. This permits a sweeping overhand cutting action of the arm as well as an ideal position for the use of the side body bend in developing additional power.

6. The Wild Cat Spring Attack.

The play calls for a low set up. In studying the movements of the attack the spiker leaves the floor as soon as, or soon after the set up is made. Exceptional timing on the part of the set-up and the attack is necessary. However in this day of blocking, a coach must use every trick he can get his hands on. The main value of this style is that the defense does not have much of an opportunity to get set for the oncoming ball, in contrast to the highly set up ball which takes much time to go up and down. Another important factor is that the attack may hit the ball on the way up or at the top of the set-up, since it is so low or at some point just as it starts to descend. Roy Anderson, a left handed attack and George Corsen, his set-up, used this play when the Hyde Park Team of Chicago was in the limelight. Many spectators felt that Anderson "hung" in the air prior to hitting the ball. The truth of the situation was that the ball literally stopped in the air, thereby giving Anderson additional time to hit the ball. The writer feels that this method of attack is one of the untouched and unexplored areas of the game which will add efficiency to the attack when the possibilities are fully realized. This style of attack could be used as a change of pace.

7. Fist Attack.

Hitting the ball with the fist is effective with many, however the majority of players hit the ball with the open hand which gives greater control of the ball.

In summarization, if an attack is able to impart some spin to the ball, direct its flight with some degree of accuracy and hit it with tremendous force as well as get it by the blockers, then success is at hand.

PLACEMENT OF THE ATTACK

In general three types of defense will face the attack as he tries to place the ball for scoring. The first is where the center forward player plays close to the net, the center back comes into the center of the court and the two other backs remain in the middle of their respective areas. The second is where the defense forms a semicircle with the center forward about five feet back from the net. The third is where the defense uses the block with various formations. These will be discussed in Chapter VI.

The following attack principles are in order with any defense formation:

1. Study the opponents' position out of the corner of your eye while the ball is being set up.
2. Hit the ball when it is about six inches above the net.
3. Hit the ball in a downward driving action.
4. If the set up is poor and a long run is necessary, cut the ball back in the opposite direction of the run.
5. Play for the back line and the corners. The attack should endeavor to send poor set ups to the far corners of the court. He should avoid sending the ball into the center position unless he is attempting to place the ball over the center forward's head.
6. A change of pace is effective occasionally. Fake to hit the ball with force, but instead of doing so bring both hands to the ball and place it in one of the far corners.

PRACTICE SUGGESTIONS

1. Jumping practice. Have the players practice the fundamental jumping position and jumps. First five trials from a stand, then five with a run using both take-offs, the two footed spring and the high jump spring. Work for height.
2. Practice hitting the ball while standing on the floor using the bent arm action with the elbow leading up and down.
3. Have the attack jump into the air and hit a low thrown ball. The coach throws the set-up to insure the accuracy.
4. Tie a volley ball in a mesh bag and suspend it from above with a heavy elastic band so that the bottom of the ball will be about seven feet six inches from the floor. Practice hitting the ball. As the players gain control and ability to hit the ball raise it until the bottom is about eight feet six inches from the floor. This is a good method for studying the action of the attack inasmuch as the ball is in a fixed position. Coach the players to hit on the top of the ball.
5. Lower the net to seven feet six inches. Throw the ball up into the air for the attack.
6. Pass the ball from the back field to the regular set-up and have him set the ball up for the attack.
7. Find out the height that the attack wishes the ball to be set up. When this has been approximated, stretch a string across the court at this height and let the set-up and attack practice using the string as a target for the correct height of the pass. Work the one, two, three regular combinations with the ball coming from various parts of the court. The string should be about six inches in from the net. Having this as a target will make for greater accuracy in the attack.

TESTS

1. Vertical Jump.

This is one of the standard tests used for many years to note functional ability and may be used in the volley ball program as an indicator of the

ability of the player to get into the air and also as an index of general motor ability. The test is quite simple. All that is needed is a wall or mounted blackboard. The person to be tested stands facing the wall with both hands stretched to their limit. Chalk is placed on the tips of the longest fingers. The player now turns his side to the wall or board and jumps into the air reaching to his utmost and touches the wall or board. This will mark the upper limit of his jump. Measure the distance between the lower and upper mark with a yardstick.

Score as follows:

26 inches	100 points	18 inches	56 points
25 "	94 "	17 "	51 "
24 "	89 "	16 "	45 "
23 "	83 "	15 "	40 "
22 "	78 "	14 "	34 "
21 "	73 "	13 "	29 "
20 "	67 "	12 "	24 "
19 "	62 "	11 "	18 "
		10 "	12 "
		9 "	7 "
		8 "	2 "
		7 "	1 "

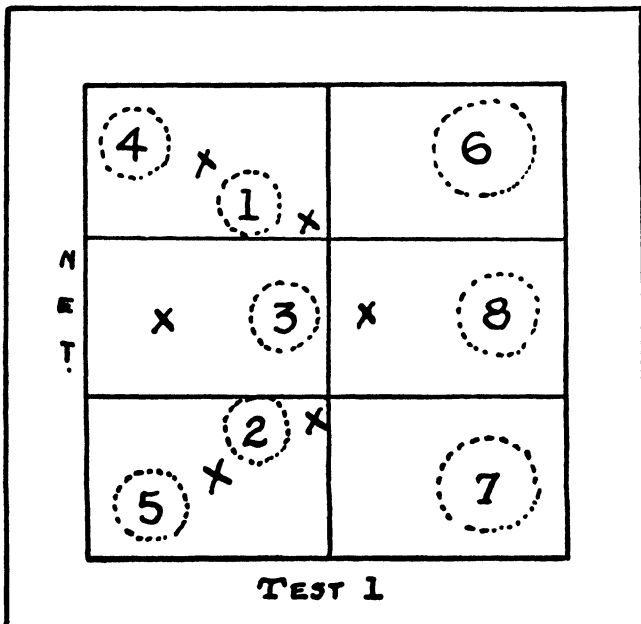


Diagram 21. Test (2). ATTACK AREAS

2. Diagram 21.

With the net at seven feet six inches, let B throw the ball up to C who will attack it and attempt to place it in certain marked areas on the floor. Place chairs in the positions of the regular players in the half moon defense. Use the string across the net to get the correct height of the set-up. Ten trials.

Attack with speed.

Into 1 or 2 area, ten points.

Into 3 area, five points.

Into 4 or 5 area, five points.

Attack without speed, but placement.

Into 6 or 7 area, ten points.

Into 8 area, five points.

Into 4 or 5 area, three points.

Into 3 area, one point.

3. Same test but have net at eight foot height.

4. Test while the game is in progress, using the following score card or chart.

ATTACK SCORING CHART											
NAME.....											
	GOOD SET UP					POOR SET UP					
	Not Over or Out of Bounds	Just Over—Lob	Over with Placement	Over with Speed	Over with Speed and Placed	Not Over— Out of Bounds	Lob	Placed	Speed	Speed and Placed	
Points.....	0	0	3	6	8	0	1	5	8	10	
1st Game.....											
2nd, etc.											
Total.....											

ATTACK SCORING CHART

As in other tests, the following might be added to the study to see what happens to the ball after the attack has hit it.

HANDLED EASILY				DIFFICULT TO HANDLE				KILLS
To a Player	Between Players	To Corners	To Center Back	To Player	Between Players	To Corners	To Center Back	

RESULTS OF THE ATTACK

5. Attack Against a Block.

Toss the ball into the air for the attack to play, at the same time have a player on the other side of the net jump into the air to block the ball. Score as follows:

Spiking the ball with force, evading the blocker, 10 points.

Placement of the ball without speed over the blocker's hands or cutting it to the side, 8 points.

Hitting the ball into the blocker's hands, resulting in the return of the ball to the side of the attack, 0 points.

6. Repeat the Test with Two Blockers.

What joy to see a team in perfect action as far as the techniques are concerned! But there is another factor which must be reckoned with and that is the part that the inspired individual plays in recovering the ball which the attack has properly hit and placed. Some of the most brilliant and spectacular work on the volley ball court is by the defense. This feature of the game will be considered in the following chapter.

DEFENSIVE PLAY

The defensive play of volley ball teams has taken great strides during the past five years. Some of the recoveries of hard driven balls border on the miraculous. This development has been due to the increased attention on the importance of the defense. Formerly it was almost an axiom that "a good offense was the best defense," in view of the fact that the ball could not be returned. This is not true today for with the use of the block and the added efficiency and strategy of the defense, the ball is more than often regained.

HANDLING THE BALL

The position of the defensive player should receive careful consideration and coaching. The aim should be to assume a position which affords opportunity to change to other defensive positions with a minimum expenditure of time and energy. The first principle of the defense is to always face directly into the attack or oncoming ball. The second is to keep the eyes on the ball at all times. When the opposition has the ball for the attack the defensive players should turn their bodies so that they are in direct line of fire from the attack. A beginner's tendency is to step to one side or duck when the ball is hit.

In preparing for the coming ball a player should have a firm substantial stance. The feet are apart with one foot slightly advanced. A good base is essential, for if the ball comes directly to a player, he is set for it and also ready to move in any direction after it which calls for alertness and the ability to shift. The knees are bent, the body is tilted forward slightly and the hands are placed in front of the chest, elbows are raised to the side on a line with the lower ribs, thumbs pointing toward each other and their tips about two inches apart. The fingers are on a line with the forearms and extended as well as spread, the wrists back. The position of the hands form a concave surface. This bowl shaped position is placed about four or five inches in front of the chest wall. The thumbs are on a line with the interior border of the sternum or breast bone.

As the ball is set up for the attack, the defense moves into the position which will be in a direct line of the attack as nearly as can be estimated. After studying the style of various players, the defensive player soon learns the favorite spots of the opposition's attack. It is all important for the defense to keep his eye on the ball at all times so that with the first movement after the ball has been hit he can shift to the most favorable defensive position. The ball is handled in the following manner when it comes to a

defensive player who is able to use the raised arm or high defensive position. On receiving the ball there is a momentary giving of the body. The hands come toward the chest wall, the knees bend slightly and the body bends backward. This tends to check the impetus of the ball and yet does not penalize the player for holding it. Almost simultaneously with this action is the tensing of the fingers, arms and legs with the forward movement of the trunk as the ball is sent forward for the second play.

If the ball is driven to the defense player so that it falls below the hips the position is quickly changed from the upper arm position to that of a scoop position. This calls for a forward bend at the wrist, knees bent and the arms flexed slightly in a downward position with the palms of the hands turned up and the thumbs out. Some coaches feel that it is easier to go from the scoop position to the upper arm position in defense rather than from the upper to lower. Experimentation on this should prove that the player changes from the upper to the lower position in a shorter period of time and the muscle action in terms of load or work is lighter.

When the ball is out of reach the player must lunge or dive for it. The upper arm action will be found to be the most efficient for the lunge and the lower for the drive. In either case the player must attempt to get his body in such a position that it will do the most good. It will be found that the power that comes from the use of body action will save many situations.

THE USE OF THE BLOCK

During the past few years blocking has become an important factor in the playing of the highly competitive game. Teams in the far west and in the central region, especially around Chicago, have included this as a part of their defensive play. In the 1938 National Tournament some teams used the three man block; that is, three players took positions at the net in front of the attack, jumped into the air and formed a fence with their six hands in front of the spiker. At the 1938 meeting of the United States Volley Ball Association the three man block was ruled illegal. The Rules Committee also ruled that in a two man block the blockers must be men who play in the adjacent forward positions.

Since 1938 practically all first class teams have used the block regularly. In the 1940 and 1941 National Tournaments it was used with telling effects. Prior to the introduction of the blocking game some of our star attack men would hit a well set up ball with such force and direction that the majority of such plays resulted in scores. It is quite different at present, for now the attacking player faces two or three distracting obstructions. Sometimes these blocking hands are spread apart, others closely massed but at all times the blocker is following the ball as closely as the attack. This means that the chances of stopping the block are almost as good as the attack's ability to hit the ball through.

The coach of an up-to-date volley ball team will have to have a definite policy on blocking, giving more attention to placement of players, forma-

tions when the block is attempted, techniques of blocking the ball as well as the recovery of it when it remains on the blockers' side of the net after the block, and how to block in such a manner that the ball is deflected for satisfactory play on the part of the blocker's team mates. It will be necessary to work on the defensive aspect of the block in a serious manner so that every player understands just what he is to do when a block is made.

Some of the Favorable Factors of the Block.

1. It tends to present a mental hazard to the spiker. When two good blockers go up in front of an attack his chances for a perfect kill are limited.
2. It upsets any attack who is not able to vary his style other than hitting the ball in one general direction.
3. It forces the attack players to be on their toes at all times in contrast to the time when they could drive a ball through without any concern other than hitting it properly. At present the attack is worried as to how he can get by the blocking hands along with the job of getting into the air and hitting the ball.
4. It has favored the tall man in the game and yet gives the shorter set-up player an opportunity to get into jumping plays at the net which add variety to his assignment.
5. It has made it necessary to work out new plays and combinations. This makes the game sparkle from the spectator's point of view.

Some Unfavorable Factors of the Block.

1. Some teams depend too much on the block and neglect the general defensive play which has weakened their ability to recover hard driven attacks.
2. Following through with the ball has caused many fouls to be called at the net.
3. With two men at the net, the defensive requirements of the remaining four players increases to the extent that it makes it difficult to properly cover the court for general defensive play if the block is not successful.
4. When two men go up after the ball and the hands are not in perfect alignment the block is generally ineffective.
5. In general the reliance on the block causes some teams to form habits of dependence on the block for general defensive play. The block should be considered as just another play in a well worked out defense plan.

General Principles of the Block.

1. Generally speaking the one man block is to be counted as ineffective unless the ball is being played in the center of the court and close to the net. At this point the single blocker has a chance of getting at the attack especially if his timing is accurate and he has studied the attack's style of hitting the ball.
2. It follows then that the two man block is the one which teams should

use. With a consistent two man block, the defense set themselves for a deflected ball or drop shot.

3. A well timed two man block can slow up hard spikes in the majority of instances enough at least to take the heart out of the attack on many occasions.

Techniques of Blocking.

The spring from the floor to get into position for the block is made with both feet. This is important as it gives an opportunity for greater control of the body. The arms are fully extended above the head. The body and arms are slightly tilted forward. The angle of the body depends entirely on the relation of the body to the net. If the block is made close to the net the body is relatively straight up and down with the arms continuing in the same line.

Greater effectiveness is to be had by starting the block some distance from the net. This permits the arms and hands to travel forward toward the net in playing the ball without going over the net when making impact with the ball. There are two theories on playing the ball in the block. The first is to return the ball to the opposite side and let that team expend its energy in recovering the ball. Several successful blocks tend to wear down the opposition. This method might be known as the direct return block which calls for a stiffly held hand with the fingers vertically extended.

The second theory of playing the block calls for the blockers' team to be on the alert to recover the block on its own side of the net. The hands and fingers are extended in such a position that when the ball contacts them it travels upward and backward into the blockers' own court. This backward tilt of the hand and fingers is important. When the blocker succeeds in playing the ball so that his teammates recover it, then the blocker has placed his team in an offensive position and it is to be remembered that the only time a team can score or recover the ball for scoring, excepting penalties, is during offensive play.

The two man block is the current style of blocking. In this formation the hands are adjacent to each other and fingers tensed and held close together. It is also important that the height of each of the hands shall be nearly on a line as one set lower than the other breaks the effectiveness of the block.

The most important factor in the block is that of timing. This depends on the ability to follow the ball from the time it has been set up until the attack hits it. It means following every action of the attack in attempting to discover just where the ball is to be played. Players who jump and close their eyes for a block have no place in this style of play. It will be surprising how efficient one becomes when following the ball and trying to outsmart the other fellow. It gives one a thrill to be able to put the heavy bomber out of business. One thing in favor of the blocker is the fact that it is not necessary to jump as high as the attack in order to block him. The attack

must get on top of the ball while the blocker plays it on its downward course. This offers real opportunity for the shorter player to get up after the ball. The use of the vertical jump test suggested for attack men will give an index of how effective a player may be in terms of being able to get into the air.

One caution which should be noted by all blockers is to avoid the follow through with the hands after the ball has been blocked. Usually the player is very close to the net with only a few inches of space between him and the net. The forward movement of the fingers in playing the ball will be the cause of his going over the net in the block, especially if the ball is played immediately back into the opponents' court.

With the two man block the question arises as to which two men go up to the block. In general the position of the set-up and attack determine to a great extent whether the right or left forward should block with the center forward. If the attack is from the left forward position then the opposite right forward and center forward should block. It follows that if the attack is from the right forward area then the left forward works with the center forward. This principle ought to hold up to the center of the court. At that point it should be predetermined as to which player the center forward would rather block with, he could easily turn toward his choice prior to the block and that player would come in to make the block with him. Another suggestion is to have each set-up and attack work together as a pair in the two-man block in as many plays as possible.

There are many unknown techniques of blocking at the present time. This phase of the game is in the initial period of its development. During the next few years students of the game will bring forward definite fundamental positions and techniques which will be helpful to the coach and player alike. The following are a few of the problems for which there is not a definite theory, at least in the minds of the general volley ball following:

- A. What is the best height to play the block?
- B. What is the best distance from the net to play the ball?
- C. Should the hands be close together? Fingers spread or in close for both blockers?
- D. What is the best angle for the hands and fingers so as to make for a better recovery by the blocker's side?

Types of Defense.

1. Reception of the Serve (See Diagram 22).

Players are spread out along a line, the forward players going to the right back of their areas and the back players coming forward to the front left corner of their sections. The general principle of play is that the backs go to the back court to recover serves sent into the back of the court and the forwards come up to get those played in the front half. If a ball goes to either corner of the court, the center back covers the right or left back in order to recover poorly played balls.

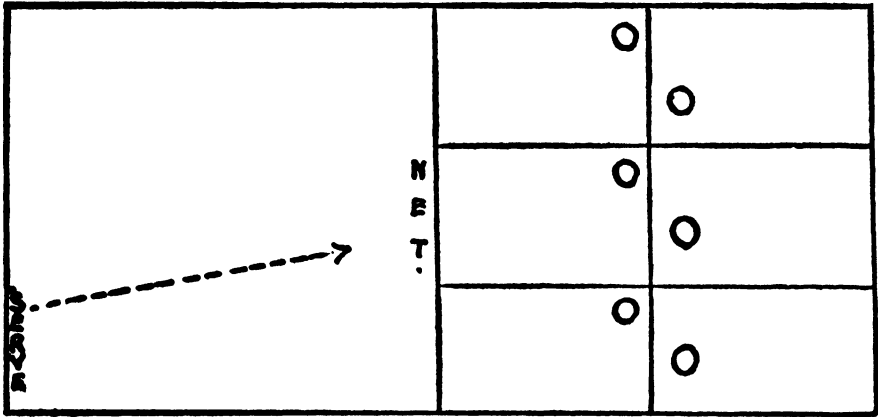


Diagram 22. POSITION OF DEFENSE FOR RECEPTION OF SERVE

2. Defensive Positions in Playing the Block (Diagram 23b).

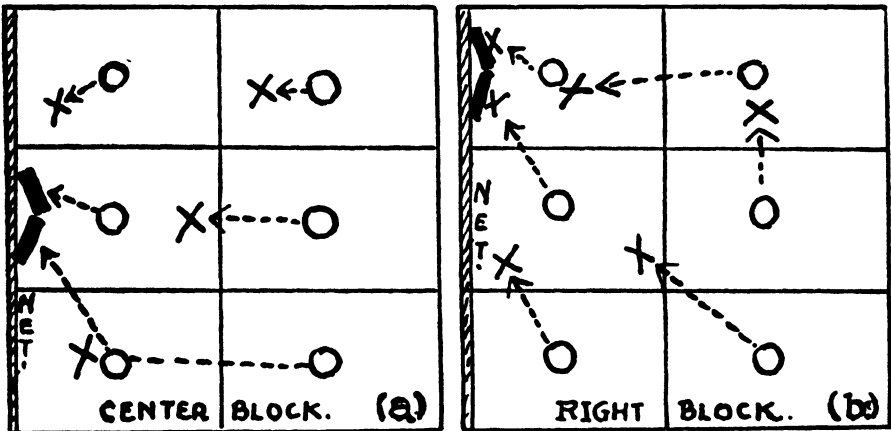


Diagram 23. POSITION FOR BLOCKS

When the block is made from the left forward position the right forward and center forward block. It would be well to have the two blockers angle toward the attack; that is, the center forward would be a little further back from the net than the left forward. The right back comes into the left forward area to watch for plays in that position. The center back moves to the left to cover the left back position of the court, the right back comes forward to the center of the court and the right forward comes to about five feet from the net and ten feet in from the side.

When the block is from the right forward area the same relative placement holds true.

If the block is made from the center and the center forward blocks with

the left forward, the right forward comes in about five feet from the net and ten feet from the side line, the left back comes into the same relative position in the left forward area, and the center back places himself in the center just over the middle line of the court.

3. The Half Moon Defense.

When a team does not use the block defense formation they are obliged to place themselves in the best possible position for playing the ball. The formation known as the "half moon" is one of the most effective styles of defense. It has been used knowingly and otherwise for many years. The general principle of being cupped around the line of fire of the attack makes it quite efficient.

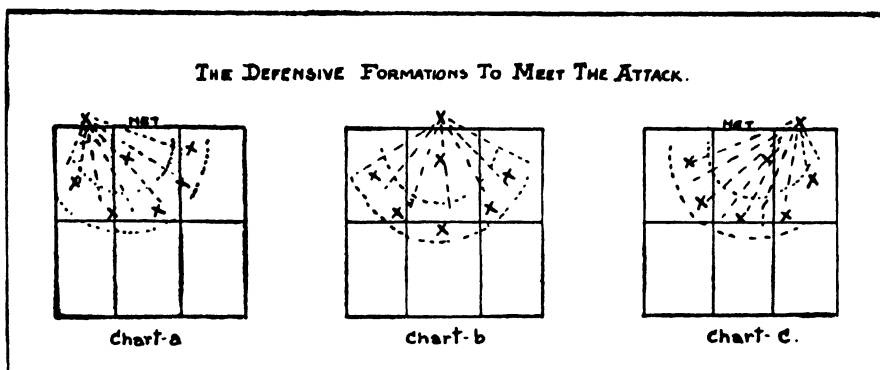


Diagram 24. "HALF MOON" DEFENSE

In this form of the defense the players take a semicircle position with one player forward forming the pivot or radiating center of the semicircle. (See Diagram 24.) This arrangement is formed on the principle that the attack is made from one point and from that spot radiate certain lines of fire. If the defense is in line of this fire it will be successful in enough instances to warrant its use. The objective of the majority of attack players is to send the ball speedily in a downward direction in the forward part of the court. With this concentrated defense in the forward half of the court, the attack will find it difficult to drive a ball through. With this formation the rear court would seem to be a neglected area. Yet from actual experience it is but an occasional ball that reaches the back of the court to score, for the simple reason that a speedy ball aimed for the back court is in line of the defense and if not, it is so high that it will go out of bounds. If the ball is sent over on a lob it is easy to recover for most defensive men playing the back positions are set for that type of play. It is only when the entire team rushes forward into the front third of the court that the rear area is unprotected.

The key man to the entire formation is the center forward player. With him rests the success or failure of this style of defense. In playing this posi-

tion he must have unlimited courage to face into the driving attack of the powerful smashes of the spiker. He is in line with the short drives as well as the balls which are lobbed over the net to catch the defense flat footed. He is eligible for balls that hit the net and fall over. Every player on the team should receive special instruction on the play of this position.

The player stands about four feet from the net and places himself so that he is in the direct line of the attack's favorite firing line. Many players find that they are able to recover more balls by kneeling on one knee with the arms extended so that the hands are in front of the face forming a protective mask and yet one which will go into action if the ball comes in that direction. If the player does not kneel he should assume a position in which he is set for the attack. A cardinal principle for the player in this position is to play only the balls which come to him directly. He should never raise his hands over his head to get a ball unless he is on his knees and the ball is coming straight down to him. By reaching up for a ball he interferes with the player in line of the path of the ball; usually the ball hits his fingers and goes over the back center.

If the attack is from the left or right forward positions, the center defense moves back from the net and steps nearer the corner position. The right forward and left forward positions play back from the net about four to seven feet, depending on the position of the attack. The further back the attack is from the net, the further back the forward approaches the seven foot limit. He should also play about four feet in from the side of the line. When the attack comes from the center he should play back about five feet from the net and the same from the side lines and face directly into the attack. He should watch for balls dropped over the net into the corner and should be ready to assist the center forward on the recovery of a swiftly driven ball. If the attack is opposite him he has a real job. He should play about six feet back from the net and five feet in from the side lines. The attack is in a favorable position to drive the ball to him or drop it over the net. He must be prepared for both. If the attack is from the far corner he must stay back from the net in line with the attack and come in toward the center and about eight feet from the side line.

The next position of importance is the center back who receives his key from the position of the center forward and plays in such a position that no ball should be able to be placed between him and the center forward. He must be ready to assist the play on either side and in front of him as well as be prepared to go back for a ball over his head. He stands in the position of quarterback who looks the situation over and then acts. In general he stands somewhere near the center of the court when the attack is on the center forward position. He moves up or back depending on the general situation. He should never get too close to the center forward. This is one of the weak spots of the defense, for when this happens the keystone of the formation has been destroyed. When you find a player who comes in beyond the center of the court, caution him as to what he is doing in

breaking up the team's chance to recover the ball. If the ball comes from the right or left forward positions, he must shift in line of the attack. Usually if it comes from the right forward position, he shifts to his right and slightly forward.

Between this position and the ends there are two other positions. When playing these positions, one's place is rather definitely outlined. One is obligated to place himself to complete the semicircle. The two men who play the right and left back positions must come up and fit themselves into the half circle as formed by the right and left forwards and the center back. When the attack is in the center, these positions are the most difficult to play in view of the fact that the two weakest spots in the defense are the areas in front of these men and the next two are directly in back of them. To play this position one must be alert and ready to lunge forward or run back to receive the hardest drives. When the attack is in the corners it will be found that again these men are in line for the heavy artillery with plenty of territory in front of them which is not adequately covered. After the general position of the defense has been discovered, run a chalk mark on the floor indicating the position from which the men should work. Do this in the three positions of the attack.

When playing this form of defense, there are several weaknesses which every player and coach must guard against. First, the tendency to come in too far. This is a common error brought about by the desire to get the ball. Continual repetition of this situation leaves much uncovered territory in the back field which is an easy target for the opposition. The next is for the back line to get down too low when a ball is hit. Many times the ball gets by with the men on their knees which might have easily been handled if they had been on their feet. The front center position is the one in which this low position is justifiable.

4. Other Defense Formations.

Prior to the use of the half moon defense the standard formation called for the center forward to play in close to the net, within five feet. The right and left forwards play in the center of their respective areas. The center back plays in the center of the court and the right and left backs play about twenty feet back from the net and seven or eight feet in from the side lines.

Another formation calls for the same positions to be taken by the forward players but the backs line up across the court about two feet in back of the center line.

Practice Suggestions.

1. Prepare a temporary platform at the net so that the coach or an assistant is able to stand on the platform and hit the ball to players on the other side of the net. The coach should be careful in the initial speed used when this form of practice is started. If the ball is hit too hard to the defense it may cause an injury to the fingers. A gradual increase in power will be much more acceptable.

Place the players in a semicircular position facing the platform and hit the ball in turn to the players, then hit it to any one of them.

2. Blocking Practice.

Have someone set the ball up on the opposite side of the net and have the two blockers jump and cover the ball. It will not be necessary to have the ball spiked in this preliminary practice. After the players have acquired the ability to time the set up properly have someone attack the ball as in regular play.

The best practice will come when the players participate in the game and the greatest problem is to keep all players on their toes all of the time when the team is on the defense. For some reason or other there is a tendency for players to let down in certain situations. The coach should encourage his players to go after every ball that is within reach at all times. If this spirit of determination to get the ball is accepted by the men, the morale of the defense will be very high. It is worth striving for as it means another chance to play the ball if so recovered.

OFFENSIVE PLAY

One of the most effective offensive plays is a good serve. This type of serve comes into the opponents' court with placement speed, curve and spin. It is a serve which upsets the receiver to the extent that he is not able to place the ball where it ought to go. Not many players or teams are willing to take the time necessary for the development for this type of serving. If a team desires to climb to any heights in the volley ball world it should recognize the possibilities in the development of the serve which causes trouble on the other side of the net.

Another style of play which seems to be worth serious consideration is the low set up coupled with the "wild cat" attack. Instead of setting the ball up to a great height, it travels from two to three feet above the net and is played by the attack in a quick spring and then smash. Careful study of this in the chapter on "Attack" will be helpful in increasing the efficiency of the offense.

Morale is another highlight of a good team particularly as it relates to the offense. Good morale furnishes extra vim and enthusiasm which helps a team to keep going. This is definitely an offensive factor for it wears on the opposing team. Bickering or sore headedness either toward a teammate or an official is out of place on a good team. Because of the faculty of "blowing up" more games are lost than teams are willing to admit. Unfortunately this disturbing element always comes to the front when a team is under pressure. The team which faces "heavy going" and seeming mistakes of teammates and officials with an inward calm but fighting spirit, will always win over opponents having comparable ability in skills.

Every team should have a system of play on the offensive so that in the majority of cases every player knows exactly what he is supposed to do. For instance if the ball comes to the set-up on the first play to whom does he pass the ball for the set up? Is it always played to the right back, or the center back, or the right forward? The smartly coached team will not take any chances but will have a definite understanding that the center back or the right back will always take the second ball when it is played to the set-up when he is in the right forward position. If he is in the center area he will pass the ball to the right forward who in turn will make the set up for the attack.

The attack of course is the big offensive power. It will be wise to coach the attack to learn to hit the ball a distance back from the net with an overarm cutting action which makes the ball drop in the back part of the court.

Attacking in face of a single blocker or two adds to the complications of the attack. At present the majority of players hit the ball into the hands of the blockers and depend on chance that the ball will be driven through. The blockers are becoming so expert that this procedure is rather ineffective. In the future the attack must be able to cut the ball to either side, place it between the hands of the blockers, or lob it into an uncovered area of the court.

Another development of the offense is to build a team so that all **six men** are able to spike the ball as well as block. This calls for tall or active **men** in all six positions on the team. They must be expert ball handlers as well as having exceptional ability in the air in the attack.

PLACEMENT OF THE ATTACK

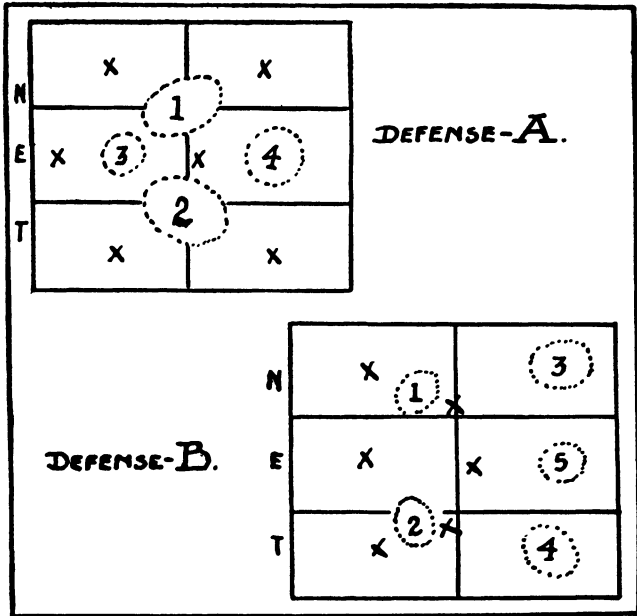


Diagram 25. PLACEMENT OF THE ATTACK

Diagram 25 depicts the circled areas as possible attack positions. In defense formation A, there are two areas or lanes which are the most formidable objectives. These are difficult to cover if the backs stay too far in the rear of the court; area 3 is another good spot if the center forward plays too close to the net; area 4 is satisfactory if the center back comes too far forward. Playing balls in the corners close to the net is effective for occasional placements.

With defense B, the areas 1 and 2 are not so large. The open territory is in

the back field and it is difficult to drive a ball there. The corners of either forward or back are possibilities for placement.

The strategy of the placement of the attack is a matter which each team must study when it finds out the style of the opponents' defense. If this is not known, the coach or some assistant should spend his entire time during the first game of a match to try to figure out the weak points in the opponents' defense.

STANDARD PLAYS

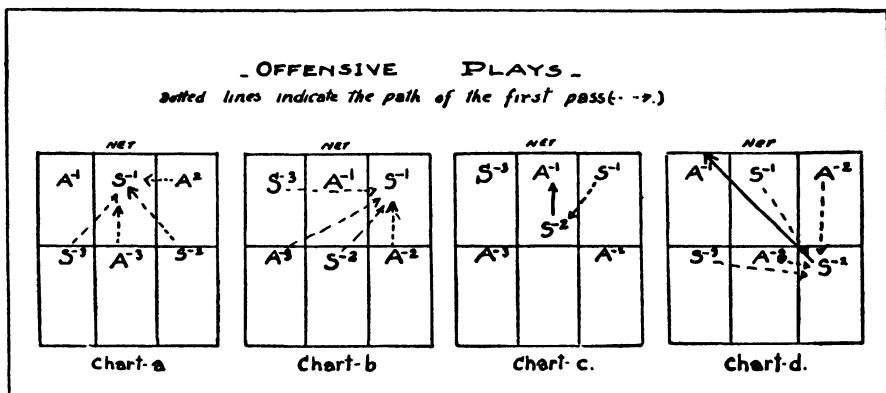


Diagram 26. OFFENSIVE PLAYS

1. Chart a. The attack is in the left forward position. The play is to pass the ball to the set-up S-1 who sets it up for the attack A-1. If the ball comes to S-1 first, he passes it to A-2 who in turn sets it up for A-1.

2. Chart b. Here the attack is in the center forward position. The play comes to S-1. If however S-1 receives the first ball he passes it to S-2 who comes forward to make the set up. This is illustrated in chart c.

3. Chart c. It is not wise to set the ball up regularly on the first play as there is little chance to properly play the ball, however, for a change of pace it is a good move.

If the attack is left-handed then his set-up will be on his left. It is good to have a left-handed player on a team as it upsets the defense who are accustomed to right-hand formations.

4. Chart d. This illustrates one possibility which has not been developed by many teams. This play would surprise the opposition especially if they did a great deal of blocking. The ball is passed back to the right back position when the attack is in the left forward position. It is passed in such a manner that if the attack failed to hit the ball it would go over the net. The attack hits the ball across the court in the opposite direction, shifting the field.

With the coming of the block, teams are obliged to cover the blockers in the defensive position so that when a ball comes over the net after a success-

ful block has been made the team is ready for offensive play. This calls for alertness on the part of the blockers. The blocker who does not touch the ball on a block must be ready to come to the floor to recover the ball if it is hit into the net or drops from the blocker's hand directly toward the floor. Many balls are recovered in this manner.

The next play of the blocker's team is to be able to recover the balls which come over the hands of the men at the net. The opposing spiker will try to lob the ball or cut it by the blockers. The other four men of the team gather around the blockers in the half moon defensive position as illustrated in Diagram 24, a and b. These plays should be carefully worked out so that each player will understand his assignment when the block is made.

General Considerations.

The offense is working to handle the ball in the triangular set-up position. In this ideal formation the set-up will not have to turn away from the attack. The ball is sent to him with a high pass which gives him an opportunity to get set for the play. Any change in this arrangement adds difficulty to the set-up.

Many times the ball is knocked into the net and may be recovered for offensive play. If the player is in correct position he will be able to recover the majority of balls which are driven into the net.

Players should back each other up on all plays. Many times seemingly easy balls have gone off on a tangent and been lost which could have easily been recovered by an alert teammate.

One of the important offensive measures is the reception of the service. Players should be on the alert for freak serves which curve, drop and float. Every player should look over the location of his teammates before the serve is made and form a mental image of what to do with the ball if it comes to him. It is well for the set-up man to face his team, prior to the serve, addressing them as follows, "All right, team, let me have a good one for Bill (the attack)." Stress that when the serve is made adjacent players should come to the side and back of the player who is to receive the serve in order to recover the ball if it is misplayed.

Whenever a player is drawn out of position he should immediately return to his position in the defense. This is especially true of the server who likes to see what is going to happen to the serve.

One fundamental principle of offensive play is to have it understood, and played accordingly, that when the set-up is in the center or right forward positions he should always go out after the ball which has been passed forward by the first player. This may mean that he will have to travel some distance at times to recover the ball, but in the long run more points will be made through this system than to let the nearest man take the ball. Possibly with highly organized and developed teams the latter may be effective, but never with beginning or average teams.

Every team should attempt to develop additional plays which will be used upon signals. When such a play is called for every member of the team

should do everything in his power to make the play go. The scarcity of plays in the game at the present time is not due to limitations but to following the easiest way. The coming of the six-man attack team, the block, the two-handed attack, the low set-up, and the increased chance for recovery of the ball all point toward progress in perfecting the game.

TRAINING A TEAM FOR INTENSIVE COMPETITION

THE COACH

The first chapters of this text have presented the fundamentals of the game of volley ball. The type of intensive play which we see at State and National tournaments is based on these fundamentals, plus morale. A good coach will bring about this necessary combination. It is necessary for him to constantly study the game in order to add to the variety and effectiveness of his team's play. He must be conversant with the rule book and other volley ball literature. Keeping in touch with the United States Volley Ball Association will bring him the latest developments in the game. Finding additional playing material is one of his chief duties. If he enlists the cooperation of other members of his squad his task will not be so difficult. Many star basketball players are excellent prospects but they must be sold on the game. To them volley ball does not have too many possibilities and it is only after they are shown the dash and driving elements in it that they become interested. Every now and then a "natural" comes along. He is that type of player who naturally takes to volley ball. He has height, spring, coördination, dash, power, defense ability and he handles the ball without any seeming effort.

The coach must have a wholesome attitude toward competition. He must want his team to win and work as diligently as he is able in this direction, but winning is not everything. The philosophy expressed in the motto in the Hutchinson Gymnasium at the University of Pennsylvania is admirable:

"To win the game is great,
To play the game is greater,
To love the game is greatest."

And the theme of the Olympic games: "The important thing in the Olympic games is not winning but in taking part. The essential is not conquering but fighting."

In volley ball we find a splendid spirit of sportsmanship on the part of the players. This is one game in which the players call their own fouls in several plays of the game, especially at the net. Up to this date, if a player touches the net in playing the ball he raises his hand to indicate that he has touched the net. Many times it is impossible for the officials to see this infraction and this act of sportsmanship is making the game truly American;—hard and strenuous, but clean and fair. The coach should carry this spirit to his men.

One who tries to have his men secure points at any price plays a losing game. He should impress on his men the need for a fighting spirit, but this should be aimed at the other team. It should not be lost in caustic remarks toward players, teammates and officials. This factor of morale is most important. The place where team morale counts the most is when the stress of the competition is heaviest. Ofttimes careless remarks to teammates and undue attention toward officials upsets the smooth working of a team. When the going gets hard, it is time to talk up to each other and not down. It is embarrassing enough to make a mistake without having it rubbed in by a fellow team member. Teach the men to put every ounce of ability and fight against the other team.

The wise coach will encourage his men to keep in fine physical condition. He should see to it that every player is properly conditioned during early season. He will never let a player go into strenuous practice or play without first warming up to some degree. A pulled tendon or muscle is an indictment against the coach. The game is requiring additional strength these days and any poor habit which players have acquired which takes away from their vitality should be eliminated. Players should eat the best foods. The essentials as suggested in the McCullom foundation diet of eggs, butter, cheese, milk, fruits, green and yellow vegetables every day, with enough foods added to keep one from gaining weight, are sensible suggestions. Players should get the proper amount of sleep and stay away from liquor. They should eliminate smoking or control it to the point where it is not necessary every few minutes. When a player desires to smoke to such a degree that he must have it during the playing of a match or a series of matches then that person has a habit over which he has no control and it should be curbed.

The coach should not only make the practice sessions interesting but he should also attempt to build into each player the desire to take pride in his own ability to such an extent that the simple routine practice stunts will be entered into with enthusiasm. He must have the confidence of the individual players and the team as a whole. He should be one who knows the game from beginning to end. Conversant with the rules and their interpretation, he should understand the various styles of play and the mental, social and religious background of each of his players. Without these facts and sympathetic understanding he might do and say things that cause deep concern at many times. These all have an effect on team play. He should study the weaknesses of each player and work with him to correct them. When these requirements are cared for then a coach will sail along with a winning combination. When the last set up is made, the last attacked banged into the last block, the players will come off the court, hang up their suits and live for the rest of their lives in the remembrances of the glorious times on the volley ball court, and in the background of it all will be the shining influence and personality of the "coach."

THE SET-UP

The set-up's chief assignment at the present time is that of handling the ball in a manner satisfactory to the attack. The fingers should be strong and long. Short stubby fingers, with but few exceptions, do not make good set-up hands. He should be of athletic build, quick, shifty, alert, ready to move in any direction after a ball on the defense or to recover a poor pass. Today every player on the team must be trained to set up the ball. There are no exceptions. With the coming of the blocking game, there has been a tendency to add taller men to the setting up department of the game. Formerly men of medium height were always sought to fill these positions, now height is important providing the taller player has the defensive qualities previously mentioned.

The set-up will need plenty of speed. Accuracy is another requirement. He will also have to learn how to block with his attack or adjacent player. In playing a game he should keep the following principles of play before him: be ready to shift to the best position after anticipating the coming play; get behind the ball, facing the attack; send the set up to the height that the attack wants it (this will range three and ten feet above the net); set the ball up so that the attack will be able to hit it about six inches from the net (this should be not farther than three feet back of the net); always keep the ball in front of the attack so that he is able to come down on top of it with a smashing blow; and always use both hands in setting up the ball.

A player with exceptional ability yet lacking emotional stability is a questionable member of a team, hence the qualities of an ideal set-up player call for a near super-man. His play in the game is not spectacular and many times the fine work he has done is lost in the subsequent smashing attack. His satisfaction must come from a piece of work well done. The set-up must realize this when he makes it known that he is interested in this phase of the game. He must prepare himself to carry the burden of the defense play and to keep the attack in a positive mental attitude. He must be ready to receive unkind and sarcastic remarks from an attack who in an unguarded moment lets his feelings get the best of him.

The set-up must assume an attitude of alertness at all times, whether in the front or back lines. He must be like a coiled spring ready for action. When the attack fails to cover his position, he must be ready to help. He must play a driving game at all times. He helps keep up the morale of the team by word or action. He must counsel his partner and teammates. All told, he must play an important role in the game of volley ball and yet finish the day's play apparently unhonored and unsung.

THE ATTACK

The general qualifications of the attack have already been presented. The most favorable height of an attack player would range between five feet ten inches and six feet two inches. This player must have great stamina and

power in his legs to be able to continually jump after the ball in the block and attack. The development of power which may be directed at will is one of the most important weapons of the attack. He must be able to get into the air and use his arms freely and pounce down on the ball with a vengeance.

The attack should have speed. He too must be like a coiled spring on the defense and an alert blocker when in the front line. While in the back line he should make all of his passes high and within reach of the set-up. When he comes up to the net for the attack he must be ready to play any ball which comes to him with the greatest of ease and skill. He must react quickly to a low set up ball, time the high one properly and play the ball back from the net with power and accuracy. He must be able to change his pace and drop a ball into an open spot when the opportunity presents itself. He must vary his attack so that the ball is not driven in the same direction, at the same speed and the same height.

The good attack will anticipate the coming play and shift to the correct position. He will look into the opponents' court and observe the positions of the various players so as to be ready for a counter play if the ball comes to him. He will hit the ball when it is about one foot above the net and in front of him; if it is too close to the net (less than six inches) he will cut in to either side.

One of the necessary qualifications of a good attack is the ability to jump into the air and reach at least nine feet six inches. He has a great physical load to carry as well as a mental, although not as heavy a one as the set-up. Every one is working to give him the kind of ball he likes. If it comes to him satisfactorily he finds it easy to be pleasant and keep up his spirit, but if it is poorly passed and poorly set up then it is sometimes difficult for him to maintain his equilibrium, especially when he has to face a pair of efficient blockers. Great satisfaction comes to him when he spikes a ball with a terrific drive or when he cleverly eludes a pair of blockers. The opportunities for braggadocio on the part of the attack are not too many these days with the increased power of the defense. Most attack players are quite humble, but nevertheless his is the spectacular part of the game.

It will be well for the attack to try to let the referee and other officials care for the calling of the fouls. The minute that a player starts to argue with an official he loses his efficiency as a player. He may win his point after heated debate but he has lost something which will count for many more points than were seemingly lost through the decision of the officials.

The attack must make an extra effort to be in a defensive position when he leaves the net. Many times the attack players feel that their contribution to the game is their play at the net and they tend to let down in the back field. If they do, the defense is weakened, and it is difficult for others to cover this weakness.

GENERAL PRINCIPLES OF TEAM PREPARATION

1. At the beginning of a season every team should have all of its players practice the fundamentals of serving, passing, setting-up and attacking the ball, as well as conditioning the hands and fingers for the defense.

2. A team should practice a minimum of twice a week and three times if possible for at least an hour.

3. During the early season there should be several meetings, off the volley ball court, of all the players and people connected with the squad. A dinner meeting usually gets these people in a good frame of mind. Here the various policies and principles of play should be thoroughly discussed. Such topics as:

1. How to keep in good physical condition.
2. What shall be the policy on serving:
 - a. The underhand serve and the overhand serve, with or without speed.
 - b. The placement of the serve.
3. What defense formation shall be used:
 - a. The reception of the serve.
 - b. The use of the block.
 - c. Defense formations:
 - When the team blocks.
 - When the team does not block.
 - d. Offensive plays:
 - Regular standard plays.
 - Variations.
 - One pass—attack.
 - Low set up.
 - Others.
- e. When should time out be called?

The final policies determined at these meetings should be accepted by every member of the team regardless of whether he believes in them or not. This means that there will be unity of play within the team which will count for much during the season. Discussions of debatable points are settled much easier around a table than on a volley ball court.

4. It would be well to have an outline of the points to be emphasized at each practice session;

First night—serving into corners.

Second night—the high pass from the back field.

Third night—the defense.

Fourth night—offensive plays.

Fifth night—blocking.

THE PRACTICE GAME

After the various fundamentals have been practiced and mastered, the practice game presents a good opportunity for team development. This calls for the integration of all the various techniques and all the players into a functioning whole. This cooperative play comes only after long periods of teaming together both in pairs and as a team. Constant shifting is necessary but very disturbing. If the coach has the confidence of the men his task will not be too difficult. If he has a large squad of expert players then his assignment is a difficult one. It is well to keep the better players together so that they may come to learn the actions and reactions of each other.

A coach should never use more or less than the required six men to a team. Any other combination will take from the build-up of the team rather than add to it. If there are more than twelve players, the coach should have some system to see to it that all of the men who come to practice are given an opportunity to play during the evening. It is important to see that no one is left out during the early stages of the season.

The coach should seek to find the right combination of players as soon as possible;—a set-up and attack who will work together during the season. These two should practice together as much as possible during the entire season.

He should never let the practice game become listless or drag. Whenever it tends to do so a shift should be made or the game called off. A colorless practice period is a liability and not an asset.

Every practice game should take on all the aspects of a regular game. Fouls should be called and every play should go according to the accepted policy. It is a poor policy to let the first squad of players come up to the gym early and get into a class game where the type of volley ball is on a recreational level. These games tend to get the team-man into bad habits. Intensive volley ball is one thing and a recreational game of volley ball is another.

During the practice game, the coach should be on the side lines and whenever a misplay is made or he wishes to call attention to some point of play, the game stops and the men gather around him to listen to his commands and suggestions.

The following paragraphs give an insight into the method used by Coach C. E. Jernberg of the Hyde Park Team who wrote to two of his players. To an attack he wrote: "Serve—Your serve is much improved. Better stick to and develop one type of service. Practice placing your ball in corners, not in the center.

"Offense—You are not getting off the floor as high as you were formerly. Develop and use oftener the cut ball, which can be mixed in to good advantage with your hard driving straight ball. You are quick on the ball if back from the net a few feet. A ball of this type is generally hit into the top of the net or out of bounds. (Joe handles this type of ball very nicely.) If the ball is not set up at right position you are inclined to kill it by netting or getting out of bounds and your remedy should be to jump high and get

the ball inside the court, particularly between players and with quite a bit of stuff on it. Your general spiking with a good pass is excellent.

"Defense—Do not move out of the proper position unless deliberately going for a ball. This is particularly true in the center position. Your hands are generally too stiff and the ball is oftentimes sent back over the net without giving your side a chance to play it. Try and move a bit faster for the ball and anticipate where the ball is going."

The second was for the set-up.

"Serve—Weak but getting better. Practice this a lot and keep the ball out of center position. Try and develop a particular style of serve and stick to it.

"Offense—Your passing is a bit sticky and in order to overcome this tendency, you unconsciously hurry the pass and it does not get the best results. As an illustration of this, your pass instead of put up to the spiker is sometimes passed immediately over your own head or back of you, causing the spiker to run across the court to reach the ball. Practice passing the ball with all fingers only in contact with the ball and you will get the maximum results. In other words with the proper kind of passing you can still pinch the ball even more so than you are doing at present and guide it better to the desired position and not be called for holding.

"Defense—You are inclined to play back a bit too far in end positions and come running in, making it a lot more difficult for you to handle the ball very well and cover a lot of ground. All of our players can and should try to duplicate your efforts in this regard."

Seeing statements like this in writing before them and then having the coach go over them in conference certainly brings the points home for attention. The results of this effort were very gratifying.

CARING FOR THE TEAM IN COMPETITION

The coach faces a real problem in the care of his men away from the volley ball court. He must impress upon them the need for application of general health principles. When on trips, he has the additional problem of trying to guide men in keeping them in the best possible condition, especially when they must participate in tournament play.

Smokers on the team should cooperate toward eliminating the habit as much as possible, especially during the last part of the season when a great amount of endurance is required. Team members should be in at eleven o'clock on nights of tournament play. Make an effort to have the men get to bed regularly at this time two weeks before the tournament takes place. The long drawn face at the end of the tournament exhibits the need for this.

There is need for moderation in eating during a tournament. Men cannot change regularly established habits and be in the best condition at the whim of some coach who feels that every individual should eat the same thing. Have some oranges, lump sugar and dextrose to give to the men between games and matches. These are the essentials for the equipment of the

volley ball squad for they build quick fires for energy and refresh men under strain.

A good supply of first aid material will save dashing about in times of need. Speaking of injuries, if the players hurt any of the eight fingers, the coach will render a real help by taping the injured member to the adjacent finger. As for a bad thumb, tape will help but caution for a while is the safest method for recovery along physiotherapy measures.

It is well to keep the players off their feet as much as possible. A short walk after meals is good followed by a period of relaxation and rest. If there is no game to be played for some time it is well to have the players go into their rooms and sit around playing cards, reading and resting. Standing up playing billiards in a stuffy, smoky room will hinder rather than help. It is well to let the men watch some of the volley ball games but not too many. Do not let the men assume the role of the supporter of this or that team, it takes a great amount of nervous energy from them. The coach will have to become autocratic in this effort as the men feel that they should be allowed to watch the games.

Players should be warmed up before they start a game. The short warm-up drill will help a great deal and it also serves another purpose in getting the players' minds off tension in the fact of doing something. When a substitute goes into play he should also be properly warmed up.

Send the men into the game with a determination and a sane enthusiastic mood. The pep talk of ancient fame has little place with a team which has been trained for months for just this occasion. Habits have been formed. It is time for action, not talk. The parting words to a team come from the coach in much of a conversational manner. The grip of the hand and the pat on the back carry significant meaning. Raving and pulling hair may start the glands to functioning but this will not compare to the smooth working of the brain over the body and the resulting action. The smooth working team does not gain its momentum from yelling at one another, it is inherent in the make up of the group. At times it becomes inspired and enthused but the play in general is methodical and efficient.

The captain is the sponsor for the team. The coach will do well to work closely with this leader in order that he in turn gains the respect of the other members of the team. It is his duty to smooth out the little personal upsets that come along during the season. His bearing will reflect much of stability, enthusiasm, fight and encouragement. When other players are upset over the decisions it is his handling of the matter that saves the team from disintegration. He is the general and his functions are many. When time out is called he and his teammates sit down in their places and quietly talk with one another. The method of electing a captain is one which must be decided by the group themselves. It is wise to wait until the members of the first team have been selected before having the election.

If the team is winning, the task of the coach is to keep them in that frame of mind without becoming overconfident. In tournament play the team should be coached to face every opponent team with the one idea

that they stand in their way to the championship. The team should play accordingly. The coach should not break up a winning combination in order to give others a chance to play unless he is not interested in victory. Breaking up a winning combination does harm to the players and upsets the organization of their play. The coach should determine the objective prior to participation in the tournament. If it is for the purpose of having a good time only, then shift players at will. If the objective is to win the tournament, his way is clear and the only changes to be made should be those to strengthen the team and not weaken it. If six men are able to play through an entire National Tournament, as has been done, and win, all power to them. No one knows what might have happened or not happened if the coach had changed the combination to accommodate some of the players who sat on the bench. If players need rest certainly it is a good plan to pull them out and let them rest. This temporary shift will not have any effect on the team except to spur it on.

The winning of the tournament is not necessarily accredited to the men who occupy the positions on the floor. It is spread out among those who by their presence have offered help and opposition to the six on the court. It is due to opposition in practice that a team is able to advance in position in the volley ball world. Six men would find it difficult to last a season alone. They would need help and need it badly.

If your team wins the coveted title you will go back home and gloat in the sunshine of the smiles of your friends and associates who for a week or two remind you of the happy occasion which ended the long season of work. After that, it will seem that every one has forgotten about the big affair. The world seems to roll on just the same.

If you lose you will come home with a determination that next year you will overcome all of the obstacles and will immediately start planning another season's strategy.

In ten years you will have to stop and think whether you won or lost at that particular time. In a hundred years you will never know the difference.

OFFICIATING

Officiating in an acceptable manner is one of the fundamental requirements for the conduct of any game. In volley ball there is a great need for additional officials who have received training, testing and enough experience to warrant their approval for first class play. The game calls for a great expenditure of nervous energy due to the complicated situations brought about by some of the fine points of the game such as play at the net, held and thrown balls, and double contact. Some officials make the game center around themselves and likewise some players are so concerned with the actions of the officials that undue attention is given to a part of the game which is entirely out of proportion to its importance.

Practice games furnish rich opportunity for the development of officials. This is the learning by doing theory. Many volley ball enthusiasts and players would like to try out as officials, but they are seldom given a chance except when a match game is to be played and this is not the time for practice or to break in new officials. The ideal setting for proper training is to have the equipment in first class shape, the ball inflated properly, the net taut and in good condition, the floor marked as called for by the rules, and an official on the platform ready for action.

The Official Volley Ball Guide presents interesting and helpful material on the art of officiating. Every aspirant to this position should own as many of the Guide books of past years as he can secure, for in them he will find a wealth of material. The new *Official Volley Ball Guide* which is published by A. S. Barnes and Co. has some splendid material on officiating.

The United States Volley Ball Association has a committee on "Officials" which is giving constant study to the subject of improving officiating. A letter on perplexing questions, addressed to the chairman whose name is always in the Guide Book, will be answered as well as appreciated.

DUTIES OF THE OFFICIALS

1. *Referee.*

"The referee shall be the superior official of the game. He shall decide when the ball is in play, when it is dead, when a point has been made, when a side is out, and shall impose penalties for all violations of the rules. He shall have the power to make decisions on any and all questions concerning the violations of the rules committed at any time from the beginning of the play to the end of the match. This includes the periods when the game may be momentarily stopped for any reason. He shall have the

power to make decisions on any question not specifically covered in the rules. The referee shall station himself at one end of the net in a position that will give him an equally clear view of both courts." * (See Diagram 27.)

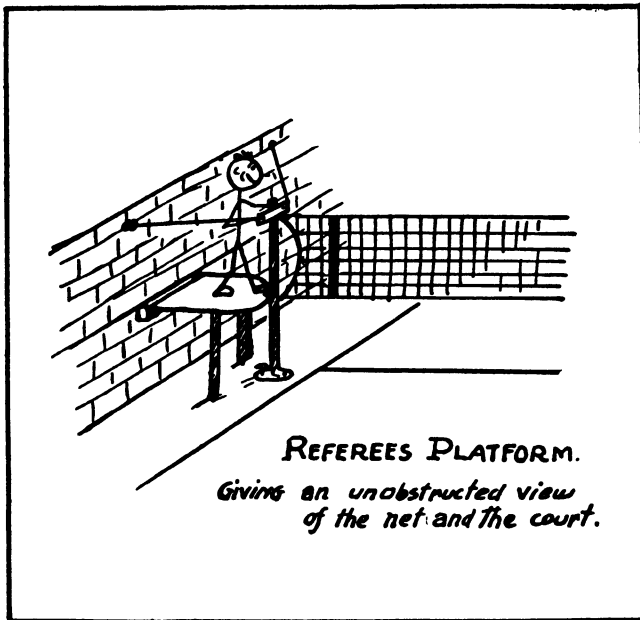


Diagram 27. REFEREE'S PLATFORM

According to the rulings set down by the rule book the referee in a superior officiating capacity seems to have the power of making decisions over the lesser officials. It should be stated here that the referee should make it clear to the lesser officials the importance of their position. Many instances have occurred where the referee has had to change the decision of the linesman who became so absorbed in the game that he did not see the ball as it struck the line and was unable to give an accurate decision.

2. Umpire.

"The umpire shall take a position on the opposite side of the court from the referee. He shall make decisions regarding crossing of the center line below the net, shall keep official time of 'time outs,' control coaching from the sidelines by coaches and substitutes, authorize the substitution of players, call contact at the net, call double contact in handling the ball, call attention of the referee to violations involving unsportsmanlike conduct, and assist the referee in any manner which may be requested by the referee." †

* Official Volley Ball Guide, 1942 (A. S. Barnes & Co.), page 9.

† Official Volley Ball Guide, 1942 (A. S. Barnes & Co.), page 10.

The umpire has a most difficult assignment because if he does his work correctly he will not be able to see very much of the game. He should keep his eyes on the center line and the bottom of the net and the players. He is also responsible for the conduct of players and coaches on the side lines.

3. Scorer.

"The scorer shall keep the official record and score of the game, and also the number of time outs for rest and substitution. He shall be seated beside the umpire, opposite the referee. Before the game the scorer shall secure from each manager or captain, names of players and substitutes and the serving order of the teams and shall see that the players follow the serving order and rotate in position." *

SCORE SHEET					
INVITATIONAL TOURNAMENT					
MATCH No. <u>5</u>					
PLACE <u>BUFFALO N.Y.</u>			DATE <u>4/11/32</u>		
<u>BUFFALO</u>			VS <u>DETROIT</u>		
PLAYERS			PLAYERS		
No	Serving Order	Substitute	No	Serving Order	Sub
1	J. JONES		6	D. ROBERTS	
2	A. SMITH	7 JAMES	7	H. PERL	
3	G. BROWN		8	K. ROSE	F. COOK
4	A. GREEN	8 PERL	9	R. LITTLE	
5	C. WHITE		10	E. BLACK	
6	D. GILL		11	S. PRINCE	11-L. SMITH
FIRST GAME					
THU 11 (9)			THU THU THU (15)		
SECOND GAME					
THU THU THU (15)			THU THU H (12)		
THIRD GAME					
THU THU THU 11 (15)			THU THU THU (15)		
SCORER - <u>J. JONES</u> UMPIRE <u>A. SMITH</u> REFEREE <u>G. G. G.</u>					

Diagram 28. SAMPLE SCORE SHEET

The suggestion is made that the scorer leave his pencil on one side of the paper or the other to designate the side serving. He should be able to tell the referee promptly whether it is a point or side out after the ball is dead. He should watch the referee to see if they agree on point and side out.

In some sections of the country exceptional work has been done on keeping score. Mr. E. C. Martini of Chicago, Ill., the official scorekeeper for many years at the National Tournament, has devised a score sheet on which he is able to record the total play of any game or match. Students of the game should familiarize themselves with this system. Other fine

* Ibid., page 10.

suggestions have been presented in the *Official Softball Volley Ball Guide*. For the average game and match some simple sheet, such as illustrated in Diagram 28, could be used until men are trained to record the various plays, fouls, etc., of the game.

Captains should hand in their line-ups irrespective of the order of the opposing team and the scorer should never allow the men to see the opposing line-up. Once the men have handed their line-up in and the referee blows his whistle to start, the line-up, according to the rule book, cannot be changed.

4. *Linesmen.*

"The linesmen shall station themselves on the opposite corners of the court, so that each has one back and one side line in plain view, and whenever the ball strikes the ground near these lines, the linesmen shall call 'good' or 'out.' The linesmen shall assist the scorer in seeing that the players follow the serving order and play in rotation." *

Additional linesmen may be added when deemed necessary. Upon request, the linesmen shall report to the referee their view of any circumstances about which he may be uncertain. Linesmen shall watch every play and be ready to assist the referee in making a decision when requested.

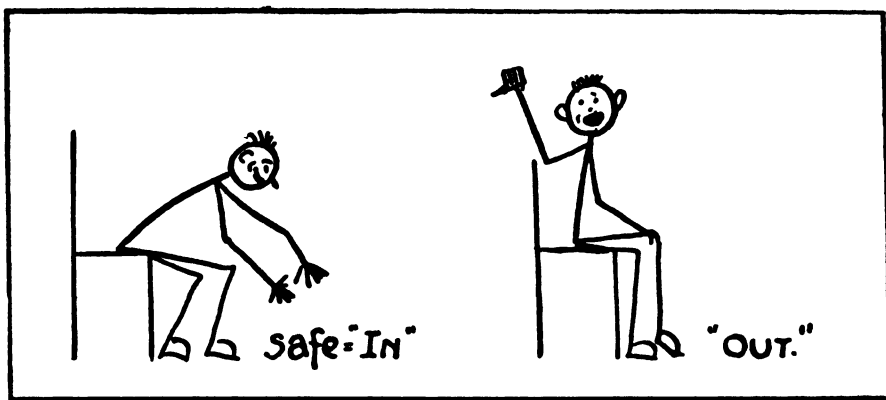


Diagram 29. LINESMEN SIGNALS

Often the referee will request the linesmen to watch for foot faults. The linesmen should sit so that they have a clear view of the boundary lines and should be on the alert to get out of the way of a man who is playing the ball. Diagram 29 illustrates one method for calling "in" and "out" balls.

In Diagram 30, chart *a*, number one watches AB and AD; number two CB and CD. In chart *b*, there are four linesmen. In championship matches it would seem advisable to have this number. Number one sits to the side

* *Ibid.*, page 10.

and in line with court line AB. Number two, back of the court and in line with BC. Number three, to the side of the court and in line with CD. Number four sits back and observes DA.

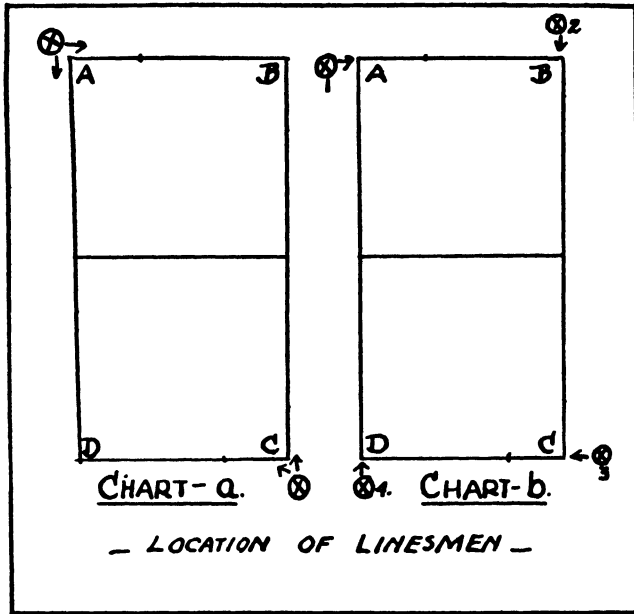


Diagram 30. LOCATION OF LINESMEN

DEFINITION OF TERMS

It is well to have a clear understanding of the terms used in the game and the following brief summary gives the fundamental playing terms:

1. *Own Court. Opponents' Court.*

The court occupied by a team shall be called its own court; that occupied by the opponents, the opponents' court.

2. *The Net.*

Any part of the net, whether it is over the court or not, is to be included and officially recognized as a part of the net when players touch it. The supporting cables and ties are also "in play." This means that players are not allowed to touch any part of the net or supporting cables while the ball is in play.

3. *Serving Order.*

The order in which the members of each team are to serve shall be called the "serving order."

4. *Position.*

When the ball is served each player is required to be in his respective area or position in the court. The court is divided into six equal spaces and so marked by two crosses at the intersections. The rules specify that each player shall retain this relative position in playing the ball; however, any player may leave his position to retrieve a ball when it is on his side of the net.

5. *Rotation.*

The shifting of the men in position shall be called "rotation."

6. *Service.*

A "service" is the putting of the ball in play by the player in the right back position, by batting it over the net into the opponents' court in any direction with one hand (open or closed) while in a position with both feet wholly behind the right one-third of the back line of the court. Note: The back line of the court should be marked so as to indicate the serving area.

7. *Point.*

"Point" shall be called when the team receiving fails to return the ball legally to the opponents' court.

8. *Side Out.*

"Side out" shall be called when the team serving fails to win its point or plays the ball illegally.

9. *Dead Ball.*

The ball is "dead" after "point," "side out" or any other decision temporarily suspending play.

10. *Playing the Ball.*

A player who touches the ball or is touched by the ball when it is in play, shall be considered as playing the ball.

11. *Out of Bounds.*

The ball is out of bounds when it touches any surface or object or the ground outside of the court. A ball touching a boundary line is good.

12. *Catching or Holding the Ball.*

When the ball momentarily comes to rest in the hands or arms of a player he shall be considered as catching or holding the ball. The ball must be clearly batted. Scooping, lifting, shoving or following the ball shall be considered as holding.

13. *Dribbling.*

A player touching the ball more than once with any part of his body, when the ball meanwhile has not been touched by another player, shall be considered as "dribbling." Except in playing hard driven spikes a defense player is allowed to make multiple contacts, provided they constitute one continuous play.

14. *Delaying the Game.*

Any player committing any act which, in the opinion of the referee, tends to slow down the game unnecessarily shall be considered as delaying the game.

15. *Blocking.*

Blocking is a defense play by players in the forward position close to the net in which any part of the body above the knees is used in an attempt legally to intercept the ball. Not more than two players may block in any play and these players must be in adjacent positions.

16. *Double Foul.*

A double foul is called when players on opposite sides commit a personal foul simultaneously. The point is played over.

17. *Dual Foul.*

A dual foul is called when one player on one side commits a personal foul and another player on the opposite side commits any other foul. The personal foul takes precedence.

LIST OF COMMON FOULS

Following is a list of situations around which the majority of fouls are called in the game. Every official should study this list and be confident that he has sufficient knowledge and ability to handle each one in an efficient manner.

1. *Serving Fouls:*

- a. Over the line.
- b. Into net, out of bounds or hitting fixtures.
- c. Either side out of position.
- d. Out of serving order.
- e. Line decisions.

2. *Holding the ball* (the most difficult to call). *Throwing the ball* (another mean one). *Scooping the ball* (underhand pass).

3. *Double Contact.*

4. *Over the Center Line.*

5. *Touching the Net.*

6. *Fouls of the Attack:*

- a. Hitting the net on the way up or down.
- b. Over the net on the attack.
- c. Throwing the ball.

7. *Blocking Fouls:*

- a. Over the net.
- b. Hitting the net.
- c. Having the net knocked into blocker:
 1. Decision on first and second play.
 2. Decision on third play.

- d. Over the center line on recovery.
- e. Blockers not adjacent players.
- 8. *Position Fouls:*
 - a. Out of position on serve.
 - b. Deliberate interchange of positions.
 - c. Blocking out of position.
- 9. *Returned Balls:*
 - a. From out of court.
 - b. Within or out of proper boundaries.
- 10. *Time Outs, Substitution:*
 - a. Fouls for third rest period.
 - b. For substitution:
 - 1. Improperly reported.
 - 2. When Captain refuses incoming substitute.
 - 3. Going to wrong position.
- 11. *Four "Hits" on One Side.*
- 12. *Conduct Situations:*
 - a. Spectator fouls.
 - b. Coaching from the side lines.
 - c. "I'll not play if he is going to referee."
 - d. Players' conduct toward opponents, officials and spectators.
 - e. Handling "hot heads," "grouches."
 - f. Sarcastic remarks from players and spectators.
- 13. *Calling Fouls by the Players Themselves.*
- 14. *Personal Fouls.*
- 15. *Double Foul.*
- 16. *Dual Foul.*

PRINCIPLES OF OFFICIATING

Fortunately for the volley ball official there is a tradition growing up with the game that when a player touches the net he calls his own foul. This is not only true in the minor competition but right through to the National Championships. It is one of the outstanding features of the game and many newspapers have taken this point and elaborated on it as "the American way" of true sportsmanship. The official who seeks the coöperation of the players in this respect, rather than discouraging them, will add to the strength and validity of this pattern of fair play. A foul is a foul whether it is caught or not. The referee's function should not be that of a policeman. There are several fouls which the officials are unable to see. One is touching the net, especially when the ball is hit into the net by a player. Another is when a player has his back to the official and plays the ball. Here there is a chance for a double contact or held ball. The fine spirit displayed up to this point promises to make the game of volley ball a gentleman's game.

Officials will encourage players to eliminate the crabbing element from their game. Volley ball is a peculiar game in that it takes extreme perse-

verence and control when the game gets intense. Any factor which tends to upset the morale of a team or player may be the deciding element as to whether a team wins or loses. Some players feel that trying to get the official's goat is a part of the game. It should be explained that when a team takes time to compete against the official as well as the other team it has two opponents. It is about all one team can do to win from the team on the other side of the net without such non-paying distractions.

The expert official will not antagonize the players. He will do everything in his power to have the players fix their attention on the game and not on his officiating. This can be done by giving the players a class "A" job of officiating.

The attitude of a good official is important. He should be confident and positive in each decision so that there is no doubt in the mind of the players or spectators as to his understanding of the situation. He should be quite willing to discuss rules with the Captain and explain why he called a certain violation. He should do so in a moderate tone of voice, firm but not abusive or arrogant. Once an official calls a foul he should never reverse his decision unless it involves a question of rules of which he is not familiar (however, this should never happen) or when a player admits making a foul which the official has not seen. If a referee changes a decision frequently he loses the confidence of the players. It also leads them to believe that they can change his rulings if enough pressure is brought to bear. A good official should know the rules thoroughly, always remain calm, expect good behavior of teams, call "point" or "side out" quickly, be as inconspicuous as possible and never be guilty of not being on the job. He should firmly believe that the game belongs to the players and not the officials.

Here are some suggestions which will help teams to work with the official:

1. Let it be the captain's job alone to talk to officials.
2. Coach a team to avoid questioning the decisions of the official unless it is a gross mistake and this should be done through the captain.
3. Have the spikers learn to hit the ball back from the net. Blocking and spiking the ball on top of the net usually results in a foul.
4. Have all of the players on a team pass and set up the ball properly with a clean cut hit, and not a sticky pass. It is just as easy to learn the correct method of handling a ball as the wrong one.
5. Teach players to stand back of the service line and not on top of it.
6. Impress upon players the importance of being in their positions when the ball is served, avoiding deliberate interchange of positions and blocking only when they are in adjacent positions at the net.
7. Find out the policy of a team in regard to calling their own fouls at the net, and double contact.

Every official should have a rule book at hand prior to and during competition. This book should be studied continuously. When questions arise he should be able to immediately locate all information on the point involved.

The referee should check each of the other officials and see that they are in their correct positions and that they have all the equipment necessary for their positions such as whistles, score sheets, scoring devices, pencils, stop watches, etc.

He should inspect the equipment such as the ball (to see that it is inflated to the proper pressure), the net and supporting cables, and the referee's platform. Have an extra ball on hand so that the game will not be held up if another one is needed.

He should see that the captains give their lineups to the score keeper and bring them together for the toss to determine which team gets the serve or the choice of courts. In all of these activities the individual with a "voice that smiles" will secure greater coöperation.

An alert official will radiate an air of efficiency so that players will gather on the court ready to play when the game is called. The preliminaries to any set of games are important. In starting the game the referee should see if all players are in their proper positions; if not, he should note the players out of position so that when the ball is served he is ready to call a foul on the player or players out of position. It would seem advisable to warn both teams of this regulation at the start of the game.

At the beginning of the game the foot fault should be observed. At times the linesman is not conscious of the foot action of the server as his attention is fixed on the flight of the ball. Have the linesman clearly indicate whether a line ball is in or out as illustrated in Diagram 29. If a linesman calls a foul on the service he should blow his whistle immediately. Both the linesman and the score keeper should see to it that the players rotate according to the rules.

There has been a great deal of discussion during the past few years on the best method of calling the "held ball rule." The author conducted a study among the top officials of the country last year and the consensus of opinion was to the effect that a strict interpretation of the rule be adhered to. One of the officials wrote: "The referee can tell quite easily by determining whether the ball has left the player's hands as rapidly as it hit them. If the ball has been distinctly batted, it will leave the hands at the same speed as it hit them. However if it has been slowed down perceptibly he has frozen it or held it slightly. Many coaches tell their players to take the spin off the ball by doing this and to an inexperienced referee apparently no foul has been committed. If this practice is to be legalized the rules should be changed for a referee should enforce the rules to the letter."

The referee should carefully observe the flight of the ball and its reception to see that it is properly handled and not held. Some officials note the follow through of the hands and the nature of the action. Notice when the first contact is made and how soon the ball leaves the hand. If there is a clear "click" with the pass it is usually a properly played ball. But if there is a dull thud or pause it stands to reason that the ball is out of motion for a period of time. Officials should observe players prior to the game and note any tendency to hold the ball. Warning players prior to the game

would seem to be much better than fouling them during the game. Special attention should be given to the set-up players who may in their effort to set the ball up properly hold on to it momentarily.

Scooping the ball and using the underhand pass invariably gets players into trouble on the held ball rule. For it is rather difficult to handle a ball in this manner without fouling. This is one reason why some of our officials are extra strict on how this type of ball is played. It is a mistake to call every ball played in this manner a held ball, and no official should get into this habit.

The opposite extreme of permitting players to hold the ball is poor practice. An official should understand what the rule calls for and then call such plays uniformly without overstrictness at one time and leniency at others.

Throwing the ball is another violation which causes much concern. Many times the set-up places the ball in such a position that the attack must reach back over his head to hit it and in so doing there is a great tendency to stay with the ball causing a throwing action rather than a direct hit. Other times the attack, in avoiding a blocker or attempting to add to the effect of his attack, will carry the ball from one point to another and then throw it down. This is done so quickly that it is difficult to observe. These fouls are the most difficult to call inasmuch as they happen so quickly. The official must be alert at all times. Again it is well to watch the point of contact with the ball and the following action. A fairly hit ball is one in which there is but a direct hit. The time element is important. Delayed action usually means a held ball. If there is a pause in the action of the arm and hand then it would be well to call a foul for throwing or holding.

The referee should keep his hand on the cable which supports the net to enable him to detect net balls and also other plays when players touch the net.

With the coming of the block the official has an added responsibility in calling these plays correctly. Observe the action of the blockers' hands and wrists and see if they follow the ball over the net. Many blockers use the vertical palms and fingers with but little flexion, while others follow through on all plays. It is necessary that an official be above the net to detect these fouls. The umpire's assistance in this play will be helpful in watching the action of the blockers on their way up to block, also to see if the net is knocked into the blockers if the ball fails to get over the net.

Some players make a double contact in playing the ball; that is, the ball hits one hand before it hits the other. Players who do not place their hands in correct positions are most liable to violate this rule. The sound of the impact will assist the referee in making the decision.

When the set up is too close to the net, the attack is liable to go over the net in hitting the ball. Locating a spot on the opposite side of the room above the net may be used for a guide. This will assist a referee in calling the fouls over the net. If a referee also sights along the net when attack and blocking plays are developing he will be ready for the play when it

reaches the net. Watch for the follow through and the flexed fingers. Carefully observe a player's action prior to and after the ball has been hit to see that he does not touch the net or step over the center line. A player may step on the line but not over it.

Be alert for balls being returned from out of bounds to see that the linesmen are ready to assist in judging whether the ball comes into the court inside of the court marker on the net. The ball is out of play if it hits the net or comes into the court when it is outside of the court boundaries as indicated by the vertical tape on the net.

The referee can do a great deal to educate the public by explaining certain points and calling fouls clearly. There are many pauses in the game which give ample opportunity to speak to the spectators concerning various plays, calling attention to the notable incident of the game. The crowd will respond to appeals for fair play and sportsmanship.

The referee's task is not that of a dictator but that of a guide who leads the group through a worthwhile experience.

EQUIPMENT

The equipment for the game of volley ball is limited and simple. The needs are few: a tight net, a referee's platform with a signal device, a score board, and a ball. However simple, the equipment should be in first class condition. A sagging net and a soft ball limit the opportunity for real play.

THE NET AND SUPPORTS.

The net and supports must be of such a nature and construction that they may be easily handled. Every gymnasium or field will have its own assets and liabilities as far as the equipment is concerned.

1. The Net.

The rules require a net thirty-two feet across and three feet wide. The thread is to be of dark brown or black cord. The canvas at the top of the net is divided into two compartments—the top one holds the net cable and the bottom one holds the top rope of the net. The rules call for a vertical marker indicating the edge of the court. This marker may be made by using the regular adhesive tape or other material. If the net does not have the metal thimbles in the four corners, it would be well to have them installed. These thimbles tend to keep the net in shape and prevent wear and tear on the ropes. These in turn are used to hook the "S" hooks, which tighten the net at the lower corners.

Diagram 31 illustrates how the net is attached to the cable in the upper right corner of the net. This form of attachment may also be made in the upper left hand corner. The method drawn in the diagram gives additional opportunity to tighten the rope which forms the top of the net. This latter plan necessitates additional apparatus but the resulting tight net is more satisfactory.

2. A set up for a gymnasium with no running track attachment is made to the walls and floor. Diagram 31 shows the general set up. On the left side the hook is held in the wall by an expansion shell. This hook is eight feet two inches from the floor. The cable is soldered around a thimble which fits over this hook. The other end of the cable is attached to an "S" hook and fits into an eye on the post. On the right side of the net is a platform for the referee which permits his officiating without any obstructions. This is made possible by the attachment of a cross arm at the top of the post, which is sixteen inches long, two inches wide and a quarter of an inch thick. Two half holes allow for cable attachments. This piece is joined to an

upright eight feet from the floor. The two diverging cables are attached to the wall three feet six inches from the center line of the net, making the two wall hooks seven feet apart.

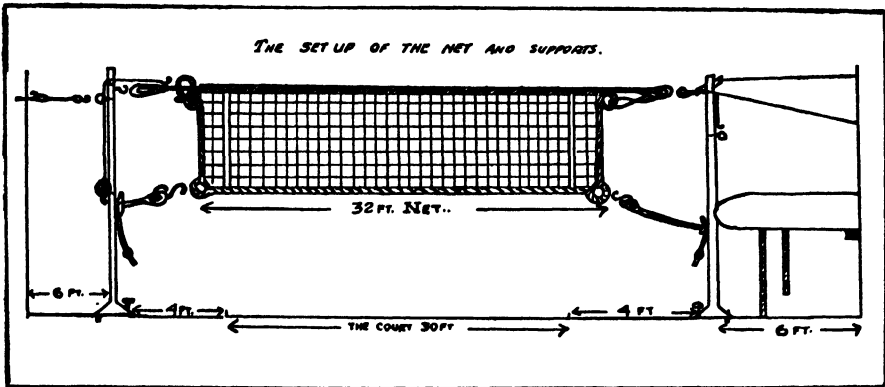


Diagram 31. ONE TYPE OF SET UP

SPECIFICATIONS FOR DIAGRAM 31:

Posts— $2\frac{1}{2}$ in. x $2\frac{1}{2}$ in., 8 ft. 6 in. high.

Height of cable attachments to the top of the pulley—8 ft. $4\frac{1}{2}$ in.

Height of rope tightening pulley—8 ft. 2 in.

Wench—4 ft. from floor on back of post.

Bottom attachments to tighten nets—3 ft. from the floor.

Posts—3 ft. from side of court.

The eye on the wall for cable attachments—8 ft. 2 in. from floor.

3. Diagram 32 shows a double set up in one gymnasium where the attachments are made directly to the wall. Double cable attachments at each end would allow officiating if desired. Another suggestion for the center support would be to have a cable dropped from the ceiling which would fasten to the floor. The danger of this arrangement is in the pulling up of the floor plates. Section *b* illustrates the possibilities which may be utilized when there is an overhanging balcony or running track in the gymnasium. Section *c*, demonstrates one scheme when there is no provision for wall or ceiling attachment.

In general practice it has been found that the use of the post uprights or supports for the net have been the most satisfactory. The post with its floor fittings and attachments to a wall by means of a cable give one an equipment which seldom causes any trouble especially if the cables, hooks, thimbles, ropes and wenchs are of durable quality. One suggestion which will save ropes from being used for other activities is to place wooden balls on each rope. These balls are held in place by a set screw which prevents anyone from pulling the rope away from its moorings.

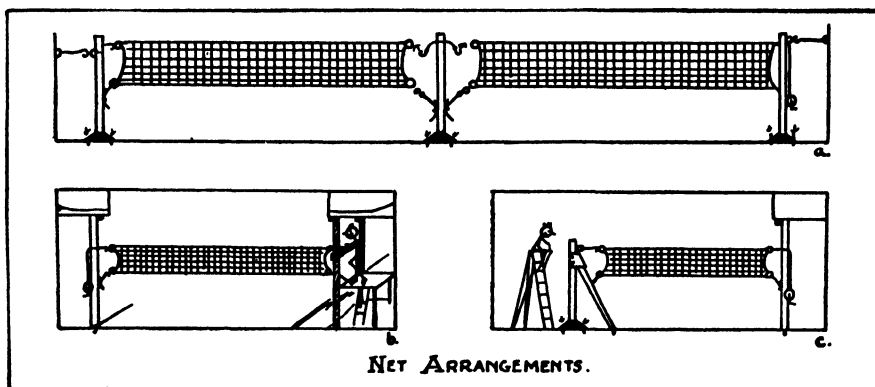


Diagram 32. NET ARRANGEMENTS

THE REFEREE'S PLATFORM

Diagram 33 presents an idea for a platform where one may officiate without obstructions. This stand is attached to the wall and swings up out of the way when not in use. The drawing illustrates the idea and the specifications are as follows:

Width—4 ft. 2 in.

Length—5 ft. 7 in.

Legs (or height from floor)—4 ft.

The support to the wall— $3\frac{1}{2}$ in. x $1\frac{1}{2}$ in.

Legs— $3\frac{1}{2}$ x $1\frac{1}{2}$ in.

The legs and platform are operated by $3\frac{1}{2}$ in. x $3\frac{1}{2}$ in. hinges.

The material used for the floor is regular flooring.

If it is not possible to secure or make such a platform the next best substitute is the old-fashioned step ladder. Every director should furnish his officials with equipment which provides ample opportunity to work without unnecessary handicaps. It is impractical to expect an official to render efficient decisions if he has to work under handicaps. Certainly judging net balls from one side of the net would be in this unfortunate classification.

THE ELECTRIC SIGNAL DEVICE

On the right side of the post and above the cable is a telegraph key signal device connected by means of wires to a regular buzzer or horn electrically operated. At the least touch by the official the buzzer sounds decisively. There is no chance to change a decision, or reconsider. This device encourages the official to act with keen mental alertness. The cost of the equipment is reasonable. Of course, without the above it is necessary to use other forms of signals. The whistle, horn, gong or bell may be used with varying degrees of success.

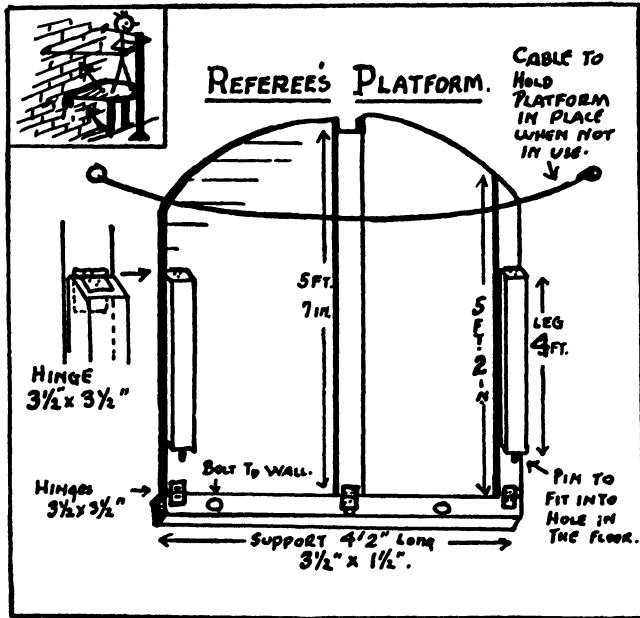


Diagram 33. REFEREE'S PLATFORM SPECIFICATIONS

MARKING LINES AND AREAS

The regulations call for two-inch boundary lines, which are at least three feet from any wall or obstruction. The court is divided by another two-inch line which is parallel to the net. From this center line at ten-foot intervals are two additional projecting lines six inches long and one inch wide. These project into each court, and mark the boundary lines of the areas. The service area is marked by two lines six inches long and one inch wide: one line to be drawn on the floor as a continuation of the right side line, and the other to be ten feet from the right side line. Both of these lines to begin two inches back of the end line. There are two additional crosses in each court which divide the playing positions or areas. The dimensions for the lines which make up the cross are six inches by one inch. They are located fifteen feet from the front and back lines of the court and ten feet in from the side lines.

The lines are a source of concern when the floor of some armory or college gymnasium is to be temporarily used for a tournament. Chalk will not adequately serve the purpose and paint is not to be considered. Two-inch adhesive tape may be stuck to the floor by using a hot iron and apply two coats of shellac on top of this. After a tournament the tape is easily removed and the floor left in good shape.

For permanency, paint is used with varying degrees of success. A paint

known as "traffic white" has been used to good advantage in many places. It dries quickly and withstands wear.

THE BALL

Several companies have been making volley balls which have given satisfaction. It is interesting to note that the specifications for the original ball have been those which have been held as the standard. The makers of volley balls have been experimenting during the late years to give the volley ball players the best product possible. The problem which they face is trying to manufacture a ball which will be light enough and yet able to withstand hard usage.

SCORING DEVICES

The score board is an important item in the well conducted tournament. The spectators and players alike look at the score board with an eagle eye. If it is easily read, well placed and efficiently operated, it adequately serves its purpose. But if any of these three essentials are missing, much annoyance is caused.

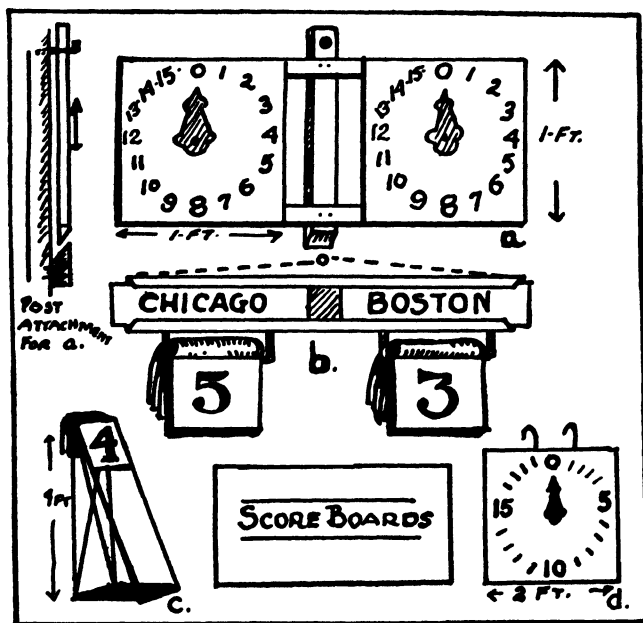


Diagram 34. SCORE BOARDS

Diagram 34 illustrates four types of such boards. *a* is a favorite and is placed on the post at the side of the court, the player nearest it during the play keeps the score. This in itself is a good thing. It may be constructed in

any workshop out of apple box ends. The indicator is cut from light metal and attached to the board by means of a movable screw. The numbers are stenciled or painted on the board after it has had a coat or two of white paint. In all, it is a very economical fixture. Score board *b*, is one which is used to advantage in tournament play because there is a place for team names to be inserted into a slot arrangement at the top of the board. The numbers are turned over on a rod chain fixture. *c* is a single score board made from lath with a twelve-inch base, the numbers are painted on oil cloth and turned over by the server. This type is used when there is no chance for any hanging score board. *d* is an enlargement of *a*, but again it is the score of a single team. The hooks at the top make it handy to hang over stall bars of any other rod.

MISCELLANEOUS EQUIPMENT

The bulletin board will be of great help if it is intelligently used and is not the depository for dead and dying material. Volley ball notices should have a specific and definite location on any general bulletin board. Educate the men to come to this board for instruction and information. It is a good place for pictures, results of tournaments, articles, rules and current events in the volley ball world fostering interest among players.

The *Official Volley Ball Guide Book* should be placed in a handy location to read and study. Copies may be tied to or near the bulletin board and also placed on the referee's stand.

An eight-foot measuring stick is another essential piece of equipment. This should hang near the court and be ready for service at all times. Have a carpenter make one two inches wide, eight feet long. Bore a hole in one end to fit over a peg in the wall.

VOLLEY BALL FOR WOMEN

Volley ball is one of the most popular games in the curriculum of sports for women. It is the type of an activity which girls and women may play with varying degrees of intensity. It is of course an excellent recreational game and may be a game of highly intensified competition.

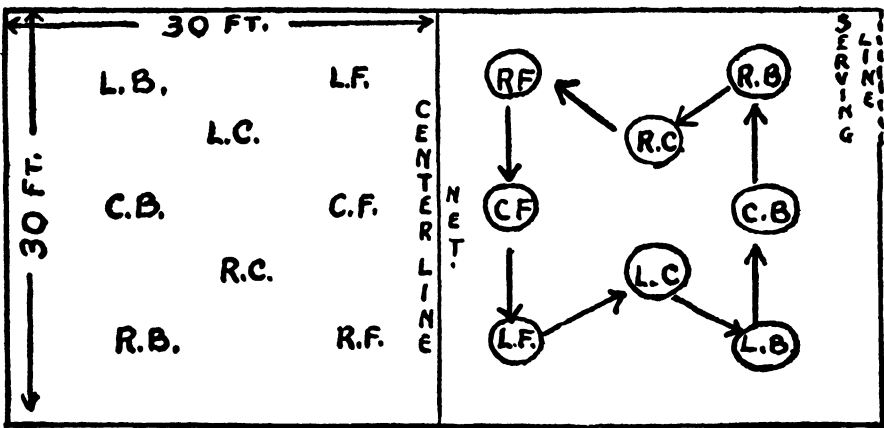


Diagram 35. COURT AND POSITIONS FOR WOMEN'S GAME

The game itself varies from the men's game in several aspects. First of all, the net is lowered to seven feet six inches and the rules state that it may be lowered even more if the circumstances warrant it. There are eight players on a side arranged in three rows, usually three at the net, two in the center and three across the back of the court (see Diagram 35). Their respective positions are called: right forward, center forward and left forward; left center and right center; right back, center back and left back. The ball may be played twice in succession by each player; that is, she may stop the ball with the first contact and pass it on with the second hit. The play is called a double hit or volley. Service may be assisted by one other player on its way to the court, if the teams decide to play this way, otherwise it must be hit directly over the net. The game consists of two halves of fifteen minutes each with five minutes rest between. This is a pattern which the men's game may follow in time.

The score is kept during each half and the total points scored indicate the winner. If the game is a tie at the end of the second half an additional

period or periods are played to declare a winner. This may be a five-minute period or two three-minute periods.

The rotation plan is optional with teams, however, the scheme of rotating is gaining in favor. The team rotates in a counter-clock manner. Incidentally, the floor is not divided into areas as for the men's game; however, there is discussion on this point at the present time.

Players are not confined to any specific area although for general team play it is advisable to cover a certain area. This freedom of movement permits any player to come forward and spike or attack the ball at the net.

A let-service is when the ball is served, hits the net and then goes over into the opponents' court. This permits an additional serve or as many serves as when the let-service occurs.

If the teams decide not to use the rotation plan, each team member in turn serves the ball. A player known as the roving back exchanges places with the player about to serve the ball.

The ball is dead if it touches any part of the body other than the hands. The rules permit a follow through when the ball is hit but they also state that the hand is not to remain in contact with the ball.

The score of a forfeited game is 1 to 0.

The sub-committee on Volley Ball of the National Section on Women's Athletics of the American Association for Health Physical Education and Recreation has done an excellent piece of work in the promotion of the game. They have made a study of the game for girls and women and the results appear in the *Official Softball Volley Ball Guide* in the Official Sports Library for Women, published by A. S. Barnes and Company of New York. In this Guide one will find the rules and many other suggestions for coaching and playing the game.

The committee have also produced a volley ball film which presents the game in a most helpful manner. They have a plan for the organization, training and rating of officials. This group of women have been responsible for the progress of the game on the various school levels and are to be congratulated for their splendid contribution.

VALUES IN THE GAME

Volley ball seems to offer many of the prime requisites for modern day expression in the fields of recreation and competitive play. It is a game which girls and women may play without too great physical fatigue if conducted under proper supervision. There is plenty of action in the game and yet time for periods of rest and relaxation. If the game is played properly there are several players required in each play. A danger in the game is at the point where one star spiker is permitted to come to the net for more than her share of plays. The game is exciting and there is opportunity for fast and tricky play.

The game may be played by all ages. Variations may be made to meet

the limitations of any age or group of girls or women and of course it may be played as a co-recreational game; that is, boys and girls on the same team. It is an excellent game for the development of posture, for a great deal of the action is in the stretching position.

It is a great team work game and calls for cleverly worked out combinations and plays. The "bang it over the net" type of game has no place in the modern day combination play. While there are many opportunities for emotional stress and over-emphasis on winning, the opposite is likewise true that there are many situations which call for sportsmanship on the part of the players. Courtesy to opponents, a fair attitude toward the officials, pulling together as a team regardless of mistakes, and calling a foul when a player touches the net are some of the situations which make the response of a character building nature.

The recreational element of the game is of great significance. In the game there is plenty of opportunity for situations which are amusing and may be enjoyed by both sides. There is much free banter of a light nature which tends to keep the participants in a happy frame of mind. Lastly, it may be as intense as any group wishes to make it. The danger at some points is that it might become too serious and intensive. When there is over-emphasis on winning and players will overdo in order to gain points, then the values are lost and the results become negative. Emotional as well as physical control is a primary requirement of the game.

PRELIMINARY DISCUSSION

After having observed the methods used by many women physical directors and educators and having seen many girls and women play the game, the author has come to the conclusion that in all probability the fundamental techniques of the women's game are similar to those of the men's game. The serving techniques, with the exception of the assist, would be the same. The handling of the ball when the first contact is made would be the same; however, the women's game permits a second contact with the ball. When the ball is stopped by a player it is so hit in this play as to travel up in the air, over or in front of the receiver's head and is either passed forward to another player or is hit directly over the net. Many women players use the underhand method of receiving the ball. The arms are flexed and the thumbs rotate outward, little fingers together. The action is a lifting or scooping movement and satisfactory for balls which come to a player below the waist. It would seem that with a little practice the methods previously described for the men's game would be applicable here. Many women use the typical chest pass method of handling the ball. Some coaches suggest that the fist be closed on the reception of the low oncoming ball, keeping the thumbs close to the first finger. This would be advisable where the fingers are not too strong. On the other hand one has so much more control over the ball if it is handled by all ten digits.

In general, the attack while not as vigorous as the men's game neverthe-

less has the same characteristics. The net is lower and some women are able to spring into the air and literally pound the ball down. Many use the cutting action which is effective. Having the opportunity of setting the ball up a second time by the attack player would be of great advantage to some players who do not use a run in attacking the ball.

With two additional players on the court it would seem that the defense would be greatly strengthened in the women's game. The semi-circular defensive formation could be set against the attack and still have enough players left to cover the back corners of the court. The offensive plays would be about the same.

HANDLING THE BALL

In assuming the position of an alert defensive player ready to receive or stop the oncoming ball, a player should have a good stance which permits immediate response. The feet should be apart with one foot advanced. The hands and arms should be extended forward with the arms flexed slightly, palms up, thumbs out, little fingers adjacent, or the hands should be placed in front of the chest, elbows out to the side just below the level of the shoulders; the wrists should be on a line with the forearm, the thumbs should be pointing downward and the fingers toward each other. While many will not agree to this chest pass, women players who have been properly coached in this technique find it easier on the fingers and wrists and also find that they have better control over the ball. The writer would advocate that this method of handling the ball be taught to all beginners. Girls and women with extremely weak fingers and wrists may have to use the closed fist, the forearm and the combined scooping action to get the ball into play. But the average player should be able to handle the ball in the manner advocated: it will bring more satisfactions, cause fewer injuries and be a greater factor in team play.

All balls, of course, cannot be handled with the chest pass position. When a ball comes to a player so that it is received lower than the waist it will be necessary to handle it with the so called underhand pass as previously described. The point should be made that in handling balls in this manner a player should use as many of the fingers on the ball as possible. Hitting the ball with the fist or heel of the hand will lessen the control of the ball's flight.

In stopping a high ball a player may let it drop into the palms of the hands, thus adding greater control. With ten points or fingers on the ball backed by two palms it would seem that a player has a perfect set up for a good stop. It is to be noted that in the presentation of the technique for handling the ball for men, the warning is made that if the ball hits the palm of the hand it will tend to go dead. In the women's game this is the desired result, for the resulting pass is not played for distance but merely to be placed over the head or a bit forward of the same person playing the ball. Caution should be taken that the stopping of a ball and the forward pass call for two distinct actions. The first stops the offensive play of the oppo-

nent, making it a defensive action. The second play on the ball by the receiver must be a well handled ball which should always be handled by the chest pass and never by the underhand method.

The recovery of balls which have been placed in awkward positions will always be a part of the game. The cleverness of the individual player will be the determinate factor in just how these are played. It is a sound principle to always try to get under the ball and face the direction that the pass is to take. Some players will be able to make remarkable recoveries. Natural ability and regular practice will be the reason for this.

Passing the Ball Forward.

When a player has stopped a ball and is ready to hit it forward on the next play it is always advisable to think in terms of passing it to another player rather than hitting it over the net. The ping-pong type of volley ball limits the game in many ways. The pass should be made in such a manner that it will travel into the air at least ten feet in height and going toward the player passed to. If the pass is good then this second player will have plenty of time to play the ball properly. She may stop it and pass it to the attack for the spike or if the pass to her is in the correct position she may immediately set the ball up to her attack who would jump into the air and play it into the opponents' court.

Whenever a team follows the plan of organization of the men's game there is greater opportunity for combination plays and much team work. With the combination set-up and attack working together, the same principles as outlined for men would be applicable for women's games. However with the non-rotation plan it would seem advisable to have a series of combination plays at the net which would permit other than the three front players to attack the ball inasmuch as it is rather fatiguing to carry the burden of the attack for the entire game. This will be especially true if blocking is used to any extent in the women's game.

THE ATTACK

Having an opportunity to play the ball twice gives the attack a second chance to get the ball in the right position for action. This calls for additional technique on the part of the attack; namely, the art of the standing attack. This has been described in the men's section and the general principles are the same for the women's game, however the one difference is in the two-hit play. If the attack does not like the set up, then she has another chance to set the ball up herself which calls for some concentrated action on her part, for she must take the part of another player and then perform her major assignment of hitting the ball into the opponents' court. Modern play calls for more than just getting the ball over the net. The attack must hit the ball with some force and direct it into the most difficult areas of recovery. This calls for a jump into the air and the ability to hit or cut the ball into the other court. This is one reason why it is advisable for the

second player to set the ball up so as to let the attack gather her utmost strength and give her undivided attention to getting the ball into the opponents' court.

At the beginning of the season give the vertical jump test to all beginners and players. This will give an indication of the jumping ability of the various members of the squad. Practice the fundamental attack movements as described in a previous chapter on the attack. If a player is able to use the bent arm attack let her continue with this style. Players who are not able to use this style of attack should then be coached in the straight arm action attack. In this method the player jumps into the air with one side to the net or directly facing it. The arms are outstretched overhead. The player hits the ball with one or both hands with a forward flexion of the wrist or wrists and forward movement of the arms in a downward cutting action. Another method is to jump into the air with the left side to the net and hit the ball with a swinging windmill action of the right arm. In this movement the right arm is kept to the right side until the jump is completed, or nearly so, and the arm swings upward and forward, coming down on top of the ball.

DEFENSIVE PLAY

Every member of the team should endeavor to catch the spirit of playing every ball to the best of her ability. With the court so well covered it should be difficult for the opposition to place a ball in the court where it cannot be recovered. The forwards should not play too close to the net, they should stay at least five feet back from the net. The two center players should play across the middle of the court. The three backs should not play too near the back line. They should be at least seven feet in from the end lines. Coach the players in the two front rows to let high balls go to the next line of defense; that is, players in the first and second rows should not raise their hands over their heads to play balls which would ordinarily fall into the hands of the next line. Players should learn to back one another up so that a misplayed ball will fall into the hands of a teammate who is ready for action. Blocking is making the men's game a different kind of a game. It is forcing the attack to work much more and adds to the variety of the game. This should receive consideration of officials and coaches as to whether it has a place in the women's game. Alertness, morale and ability to retrieve balls are the factors which make good defensive teams.

OFFENSIVE PLAY

The first requisite of the offense is to have the ball properly handled by all players up to the point where the attack must put the finishing touches on it. Skillful handling of the ball is as important as the ability to attack. This point is stressed in view of the fact that many players excuse their poor passing with the thought that the next player will make up the differ-

ence. Every player should make a definite effort to handle the ball to the satisfaction of herself, the next player and the coach.

The direct line of combination play sends the ball forward to the net to be set up for the attack. If the rotation plan is used and the team is made up of four pairs, then the regular system which the men use is in order and all of their principles will be suitable. However if the non-rotation plan is used and the roving back is in operation a team must work out its plays on the basis of the strength of the individual players and their respective ability to handle the ball. The center players or the forwards may act as the set-ups. It all depends on the quality of the players. Some attack players may desire to set up for themselves.

One standard play suggested is to have the backs pass the ball forward to the net and have the right center recover the balls sent to the right side of the court for the set-up and the left center set up those which fall in the left. If a ball drops into the dead center near the net, the center forward should set the ball up for the left forward. Or the forwards may do all of the setting up and all of the attacking. If this is the case it seems that they are carrying the major play of the game and it would be much better to bring the right and left centers into the game for the set up play.

It is a great game for women and once again the women deserve credit for their splendid progress which has been made over the years.

VARIATIONS OF THE GAME

There are many ways to play the game of volley ball. The game may be modified to meet the limitations of various groups.

TOSSING AND CATCHING

This is the simplest form of the game. It is played by any number on each side, the ball being thrown and caught instead of batted over the net. Points are scored when the ball touches the floor or goes out of bounds. Boys and girls enjoy this game as a lead up to volley ball. It is also a good game for women whose physical strength limits their activity.

After a group has played this way for a period of time various features of the regular game may be added; such as the plan of rotation and having only three plays on each side.

SHOWER BALL

With large groups of players the game of shower ball is excellent for limited periods of time. Divide the players, placing one half on each side of the net. Give each side two volley balls. On the signal to start play, each side throws both balls over the net attempting to place them so that the opponents will not be able to catch them. Every time a ball hits the floor counts a point against the team on that side of the net. Each side has a score keeper. Five minutes to each half is sufficient for play.

BOUNCE BALL

One of the annoying points of the game is that the ball is out of play much of the time. Any method of keeping the ball in play longer with beginners would make the game more interesting. Letting the ball bounce once is one way of improving the action of the game. Boys and girls like to play this game and it is particularly adaptable to middle aged women. There is enough skill required to make it challenging and the competitive elements are sufficient to add zest to the game.

When first introducing the game the server is permitted to toss the ball over the net. The opponents may return it directly or they may let it bounce on the floor and then hit it over the net or pass it forward to another player. In making each play the ball may be bounced but once. The rules permit any number of plays on one side of the net before the ball goes over, but this

slows up the game. It is much better to use the three play rule as soon as possible.

The net may be placed at various heights. For the game just described it may be anywhere from six to eight feet. There are many variations in the game with the net lower than six feet. It is possible to play the ball up to the net and hit it over with speed. When the net is at three feet and a bounce is permitted the game is one of the most active in the sports curriculum for women.

MASS VOLLEY BALL

When there are more than six men on a side or more than eight women, it is more of a mass game than a team game. While team work is possible the general play is in the nature of a recreational activity where most of the fun comes in shouting and laughing. The ball is batted over the net and the general rules of the game follow. Each player takes a turn in serving. Sometimes the rotation feature is used but usually it is not. With beginners the ball may be played as many times as desired on each side of the net. This should be discouraged as soon as possible however for it does not add to the game.

Occasionally beginners should watch a regular game to arouse their enthusiasm to want to play it correctly. If this is not done the game will become a dull experience. The average player likes to improve in skill and with this development should come an opportunity to play a game which is on a higher level than that of mass volley ball.

VOLLEY BALL FOR JUNIOR BOYS AND GIRLS

When boys or girls have mastered the lead up games of volley ball they should be taught the principles and techniques of the regular game. However some modifications must be made to make the game interesting. The size of the court should vary according to the number of players in the game. It is suggested that when six players make up a team that a court twenty by forty feet be used; with nine on a side, twenty-five by fifty feet; and with twelve, thirty by sixty feet. The net should be six feet six inches high. The serve is made from the center of the court. Two serves are permitted and any number of plays may take place on one side of the net. The bounce may be permitted and the game is usually played in two ten minute halves.

THE DOUBLES GAME

In many sections of the country from California and the midwest to Pennsylvania and even far Honolulu, the doubles game has been quite popular. In fact so much so that the National Championships have been held. The game calls for stamina, skill and great speed. Each player must be an expert at both passing and attacking as well as clever placing of the ball. This is one variation of the game which attracts the younger players. Prop-

erly applied, doubles may be utilized as a training procedure or at least as part of a training process for representative teams.

The standard rules are used with but few modifications; namely, that the court is shortened five feet at each end, making the over-all court twenty-five by fifty feet. The Chicago group rule that crossing the center line be permitted when the players do not interfere with the opponents.

It is suggested that when women play doubles, the court measurements be fifteen by forty feet.

The California and Pennsylvania mixed doubles games and tournaments have aroused much enthusiasm among participants. Husbands and wives play together on some of the teams and it is said that some great combinations have been developed through the game.

MIXED VOLLEY BALL

Volley ball is one of the few major sports which offers the opportunity for women and men to play together. Teams are composed of three men and three women, sometimes the number is four of each. The game is played in two fifteen minute halves, the highest score winning. The rotation feature is optional. A let-serve is permitted. Women may hit the ball twice in succession but when so played the next ball must go over the net. The height of the net varies between seven and eight feet.

Some groups lower it to seven feet for one game and let the women spike, then in the next game the net is raised and the men attack. Men are prohibited from hitting a hard driven spike directly at a woman player. Some teams feel that the women are as good as the men on the defense and waive this restriction, but in general men do not hit the ball with force toward the women.

The game may be played in halves or according to the regular rules. It is generally agreed that when the game is properly presented to women players the official rules for men may be used without too many modifications.

MISCELLANEOUS SUGGESTIONS

1. A giant volley ball known as a cage ball which is thirty inches in diameter may be used for mass activity. The only rule is to get the ball over the net into the opponents' court. It is most strenuous and much fun.

2. One freak variation of the game calls for four nets radiating from a central point so that four teams are required. A team has the advantage of playing the ball in two directions. With one ball the game is more of a novelty and somewhat slower in that two teams are out of play at all times. However for an exhibition game it has possibilities.

3. Singles is another variation. One player on a side. If the court is between ten and twenty feet wide and twenty feet deep the player will be able to cover the ground. The second hit rule, as played in the girls' game, adds to the interest of the game.

4. Hang sheets over the volley ball net and play according to regular rules. The ball is always hidden from the other side until it is batted above the net. Many amusing situations occur in this game.

5. In social recreation periods, balloons may be used to play the game instead of the ball. It will be necessary to have three or four balloons inasmuch as they tend to float, moving slowly, and one alone would not furnish enough action.

CLASS PLAY LEAGUES AND TOURNAMENTS

The first part of this chapter is written primarily for organizations who are now promoting volley ball as an intramural or class activity. The average director is faced with certain problems of concern such as:

THE SELECTION OF PLAYERS FOR CLASS PLAY

With the growing popularity of the game the director of athletics is faced with the problem of caring for a large number of men in limited playing space. When more than eight players are grouped on a side the game is slowed down by limited action. As a purely recreational game with no thought of exertion or organization it is possible to place as many men on the floor as space permits. The class director must face this situation to determine his objectives and answer the following:

1. Is the game to be a simple one of merely batting the ball over the net for a good time? Or is it to be one where the basic principles of team work are used? Or is it to be a highly organized game where every move is watched with concern? All three phases of the game have their place.

Man is easily satisfied if his interest is maintained but let his interest lag and it takes a great amount of effort to regain his whole hearted participation which seemed to come so easily at first. It is known that annoyances hinder progress while pleasant experiences tend to make the participant repeat said experience. The average man is desirous of gaining skill and thus makes progress. On the contrary if one senses no progress and is annoyed by players calling attention to his faults he is liable to build up a complex against the game and soon lose interest. This brings about a second problem.

2. How shall a new player be introduced or conditioned to play the game?

This has been covered in the beginning chapters of the book and in review it is worth repeating that no director or instructor should permit the applicant to start the game without some preliminary word of explanation or coaching. The extent and amount of this training will depend on the time available. Failure to properly induct beginners has lost many players to the game.

3. How shall players be divided into teams for regular class play?

This is the main problem of the director. The question arises as to whether players of different ability should be placed on the same team. Usually the good players resent this, especially if it is continued for any length of time. The poorer players are also conscious of their shortcomings

and fail to enter into the play with the spirit of abandonment. This is not a wholesome situation for either set of players. Occasionally it is permissible to mix the players but for regular play each group handicaps the other.

Mr. William Hultgren of the Boston Y.M.C.A. has devised a system which takes care of more than twelve players when only one court is available. Twelve men are placed on the court and the game starts with all other players lined up in single file beside the court. The man at the head of the line takes the place of the man playing who makes a mistake or error. The out going player takes position at the end of the waiting line and gradually works his way up until he is at the head ready to replace any one who makes an error. This plan of operation is the source of much fun and fellowship. The decision of the man at the head of the line is not to be questioned as his word is final. Each group makes its own rulings as to which plays constitute errors, thereby causing a player to lose his position; such as, loss of serve, poor pass, out of position, poor set-up, failure to get the ball over the net, fouls, etc.

The choosing of teams is an embarrassing situation for many men. If there are two courts it would seem advisable to have the players rated according to ability. Let the better players take one court and the poorer the other. The instructor should spend the majority of his time in coaching the poorer players.

There are several methods of classifying players. The first and easiest is for the director to rate the players according to ability. The second method includes the director working with a select group of committeemen who classify the men. The third considers the players' opinions of each other. Pass out slips of paper with the class enrollment on one side and on the other a series of numbers. The men are asked to rate all the men in the class; that is, opposite number one place the name of the player whom he thinks is the best in the class and so on down the list until all of the players have been given a rating number, himself included. These slips are then tabulated and players rated accordingly. Obviously the lower number after a man's name the higher the rating. When the group again assemble for play the attendance is noted. If twenty are present, the ten highest names of those present play together while the ten lowest play in the second court.

A far better method of securing this rating would be to have the men pass tests such as outlined in previous chapters. It would be much fairer and each individual would have some definite method to note improvement. A class committee could prepare a league schedule with the names of the various players listed on one team or the other. Another suggestion is to have the captains select the various members of their teams. When it is time for the game, read off the names of those whom they have selected. This procedure relieves embarrassment of the poorer players who are left until last. A final plan of choosing teams is to have the director indicate the captains and also place the men. His knowledge of the players and observation of their idiosyncrasies will help him in his selecting.

LEAGUES AND TOURNAMENTS

Leagues and tournaments assist in keeping up the interest of men who play the game. These events are the extras which break the regular routine. In some cases they are a source of annoyance to some participants due to the fact that the game becomes too serious. If they do not extend over too long a period they are worthwhile events.

Leagues and tournaments are suited for general class intramural programs as well as open competition. In class play the round robin type of tournament gives opportunity for every team to play every other team. If there are eight or more teams it would be well to organize into two divisions, four in each division. The winners of each division play for the title. In setting up a schedule for round robin type of play the following method is of great help; it is known as the "traveling 2" system.

1 ST Round	2 ND	3 RD	4 TH	5 TH	6 TH	LAST (PROOF)	
1-2	1-4	4-2	4-6	6-2	6-8	8-2	8-7
3-4	3-6	1-6	1-8	4-8	4-7	6-7	6-5
5-6	5-8	3-8	3-7	1-7	1-5	4-5	4-3
7-8	2-7	5-7	2-5	3-5	2-3	1-3	2-1

Diagram 36. ROUND ROBIN DRAWING—"THE TRAVELING TWO"

Place the total number of teams into columns starting with 1-2, at the top. If you have eight teams the set-up will look like this—

1-2
3-4
5-6
7-8.

Now make diagonal lines connecting the figures on the upper left column to the figures on the next lower right column;

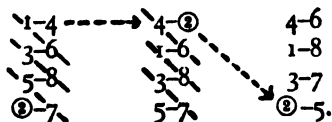
1-2
3-4
5-6
7-8

copy the diagonal figures, making
another column of them on the
right

1-4
3-6
5-8
2-7

Place "2" in lower left column
and bring the 7 across.

Now you are ready for the next step. Draw the same diagonal lines. This leaves #4 untouched and the same with #2. Start another column placing #4 in the upper left column and #2 in the upper right, then proceed to copy the diagonal drawings.



Note the excursion of the #2 in Diagram 36 as it travels from the upper right to the lower left, then up to the upper right. This is the key to the system. It will save many hours of work if mastered. Another good thing about this set up is that the divisions are already made for different dates or places to play. It is possible to take the first line across which gives the first game of each of the rounds. These games could all be scheduled for Mondays; the second line across for Tuesdays; the third line for Mondays, and the fourth for Tuesdays. The first and third, and the second and fourth work together.

Another type of competition is the elimination tournament getting its name from the fact that when teams are defeated they are eliminated. In the single elimination, if a team is defeated once it is out of the tournament; in the double it must lose two times to be eliminated. Another type is the Consolation Tournament usually held in large tournaments of the single elimination type. Here the teams which lose the first game they play, come together in a tournament of their own and declare their own champion.

The drawings in the single elimination tournaments work in the following manner. In Diagram 37, it is noted that there are upper and lower brackets in these drawings. The teams retain their identity in these brackets until the winner in each is declared. These winners then play for the championship.

In the double elimination we find somewhat of a complication. (See Diagram 38.) The teams that win all of their games continue to the right. Those that lose the first time drop down to the losers' bracket and declare a winner. Those who lose twice are eliminated. The teams that lose their match in the first round declare their own winner and so on for the second, third and fourth. The final winner in the losers' bracket plays the winner of the winners. This gives the winner in the winners' bracket a chance to lose one match with the winner of the losers' bracket and still be in the running for the championship.

The drawings of any tournament are very important, usually the best teams are seeded; that is, they are divided in opposite brackets. This lets the better team meet on the winners' side after the first and second rounds have been played. In the National Tournament the winner and runners-up are usually placed in opposite brackets. If there are two teams from one

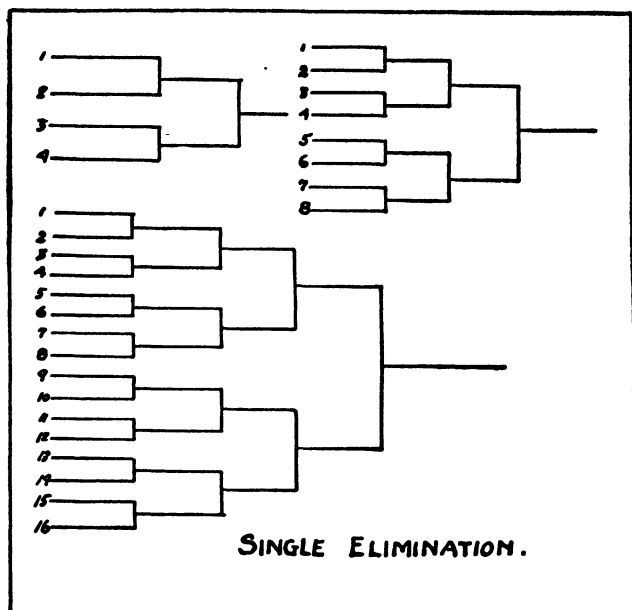


Diagram 37. PLAN FOR SINGLE ELIMINATION TOURNAMENT

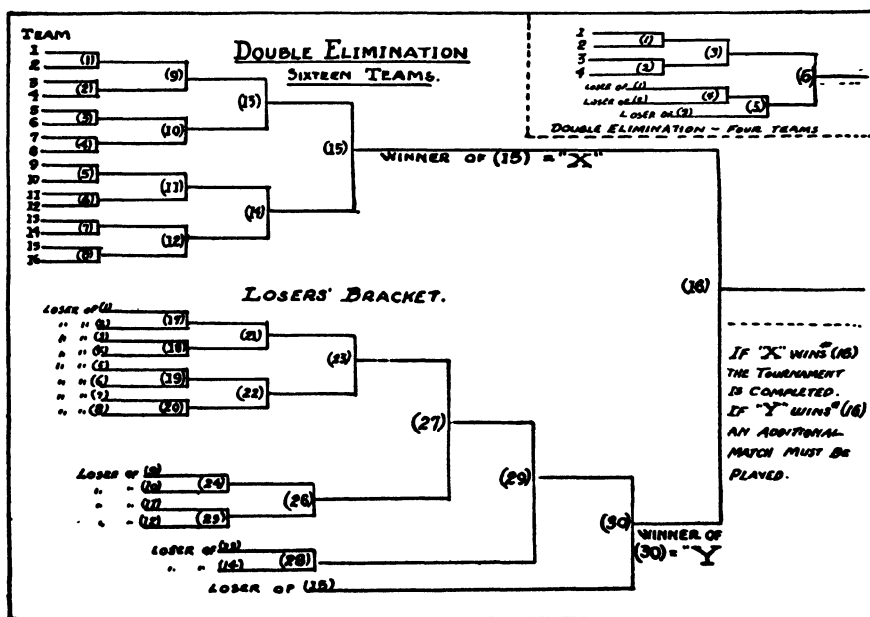


Diagram 38. PLAN FOR DOUBLE ELIMINATION TOURNAMENTS

State or locality they are usually divided into the upper and lower bracket drawings.

If there is a shortage of teams to fill the schedule then it is necessary to draw byes. Usually the byes are divided in the upper and lower bracket. No. 1 position or No. 8 in the upper first and No. 16 or No. 9 second. The additional byes are allotted accordingly.

The chairman of the tournament and his committee usually make the drawings. Blank cartridges may be used to advantage for this. The number is written on the inside of the cartridge, these are put in a hat and an appointed individual draws them one at a time. The teams are placed in order, the top one is given the number corresponding to the number on the first cartridge drawn. First team on the list might be Boston. The first cartridge drawn is number 6. Boston will take the sixth position in the schedule and will play the team whose number is 5.

The naming of the teams for intramural play has a great deal to do with the success of local leagues and tournaments. Much spirit and fun center around such titles as Smith's Wildcats, Brown's Tigers, Panzies, Daffydills, The Nut Leagues, The Berry League, Big League; also colleges, animals, dentists, doctors and such. A little thinking on the part of the director and his captains for ridiculous names will add much to the enjoyment of all.

League attendance and tournament participation will be stimulated by the sending of notices of the league standing, as well as calling attention to the special features of play. The use of the little dummy linesmen carries much significance to the players, as illustrated in Diagram 39.

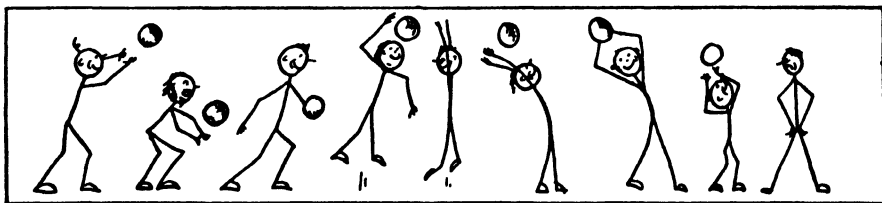


Diagram 39. DUMMY LINESMEN SUGGESTIONS

Awards may be the source of much pleasure and amusement or of much annoyance and dissatisfaction. They should be minimized for class play and local tournaments. If granted they should be of little value except as a memento of the event. Individual medals may be made for the winners of the class league and presented at a volley ball banquet. These medals can be made from the tops of tin cans bronzed and appropriately lettered. Tin cans soldered together and bronzed to resemble a trophy cup with various attachments purchased from a novelty store make up a prize that takes the fancy of the players.

Mock certificates for special volley ball ability, etc., are easily drawn up by members of the group. These are inexpensive and add to the jollity of the occasion and good fellowship. Have a well-known orator make the

presentation speech if possible. A series of previously made telegrams may be delivered by a messenger boy to the toastmaster who reads them; the content is a joke on one of the members present. Talks of an informal nature are given during the evening as well as group participation in singing. The songs may be parodies on the class members. The event is handled by a committee and the winners are the guests of the losing team of the league.

ORGANIZING AND CONDUCTING A TOURNAMENT

The following is applicable whether one is planning to conduct a local tournament or the National Championship. A first consideration is to determine the nature of the event. A double elimination with eight competing teams will necessitate the use of two courts, taking the period between two and eleven P.M., if the teams are of an even caliber. A round robin with more than six teams presents an impossible situation. Too much dissatisfaction occurs with too many teams sitting around waiting to play. In summary, for a day's play four teams are sufficient for a round robin and not more than eight teams for a double elimination. It sounds fine to be able to advertise that there are to be fifteen or twenty teams participating but the working out of this for one day's play is not practical. It will take two full days to properly play a double elimination tournament such as the National Championship with sixteen teams participating.

Definite time schedules for other than the first games have proved unsatisfactory.

It always seems that at the last moment one or more teams drop out of the schedule which calls for the remaking of it. Mimeographed schedules prepared on the day of play would seem the best. Of course the general set up is essential and should be ready so that the teams have a fair idea of their schedule when they arrive. Some tournaments have the teams draw for positions just prior to the starting of the tournament. This avoids the possibility of argument when two different gymnasiums are used in which one is a bit better than the other.

The successful tournament is one which has been organized by a group of committeemen who have functioned prior to the tournament and are on duty when the event is being conducted. The following is a sample organization of a National Tournament.

1. Chairman of the tournament. Usually the local volley ball chairman with his committee is in charge. He has the final say on officials, disputes, etc.
2. Advertising and ticket committee. This group prepares copy for tickets and advertising and sees to the printing and release of material to the newspapers.
3. Ticket distribution chairman. Has charge of the distribution of tickets for the tournament as well as the final accounting of them. In charge of the gate-keepers.
4. Entertainment committee. Sees that the proper information is sent to

all invited teams. Arranges for reception on arrival and takes care of advance hotel accommodations. This committee also arranges for the dinner for the visiting teams, usually a complimentary affair.

5. Awards committee. Chairman and committeemen select and secure trophies and medals and arrange for their display and award.

6. Equipment committee. This committee and the staff members arrange for all properties of the game including the construction and installation of special equipment. They are also on hand during tournament for emergency work.

7. Minor officials. The chairman is responsible for the securing of the score keeper, umpire and linesmen. He is on duty during the tournament keeping the various positions filled.

8. Ladies committee. If it is known that ladies are coming with the visiting teams, an effort should be made to secure some of the local ladies interested in volley ball to attempt to entertain them.

These groups should meet and plan their work a month or so in advance of the tournament. They should be alert to the need of the advance sale of tickets. It is the advance sale which determines the financial success or failure of the event.

As the teams arrive it is well to give each player printed instructions pertaining to the tournament and other general information such as schedules of games, when and where held, special rules of the tournament, locker assignment, tickets for banquet, general pass to building facilities, player's tag which admits him to the place of tournament, a map of the location of the tournament headquarters and information as to getting there.

The tournament should start on schedule. In the National Tournament teams are penalized for being late. This would be a good thing in local tournaments. The score board should be placed where it can be clearly seen by spectators and competitors.

When the tournament is finished, the tournament committee on awards should make their presentation. The director should mail a mimeographed copy of the tournament's results to all teams.

The tournament is over and the call of the great out of doors beckons the volley ball enthusiasts. Many answer the call, taking with them happy memories of the past season and keen anticipations for the next. Many fail to hear the call and report night after night to play the game which brings them joy, happiness and a sense of achievement. At present no matter what time of the day or year, we find people playing this game called volley ball. It is but an infant and its growth has been rather slow, but sure. It stands on the threshold of intelligent and enthusiastic recognition. People like you and I who have been interested enough to read and write about it should do our part in properly presenting the great possibilities of the game.

"For when the One Great Scorer comes to write against your name,
He writes not that you won or lost, but how you played the game."

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